STUDENT-TEACHER RELATIONSHIPS: LINKING RELATIONAL CONSTRUCTS OF CLOSENESS, CONFLICT AND DEPENENCY TO STUDENT ACHIEVEMENT: A QUANTITATIVE STUDY

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CHAPTER ONE: INTRODUCTION

Historically, achievement gaps among different groups of students have concerned government and education leaders. For example, in the 1960's, President Lyndon Johnson's "War on Poverty" focused directly on inequalities in the educational achievement between economically disadvantaged students and their more advantaged counterparts (Guskey, 2005). More specifically, The Economic Opportunity Act of 1964 and the Elementary and Secondary Education (ESEA) Act of 1965 were the first major federal aid to education programs targeted specifically at disadvantaged children. Title I of ESEA authorized funds and set federal educational policy in a direction that has continued for more than four decades.

At the time, the president and most members of Congress had high expectations of the new educational legislation. They believed that not only would ESEA help disadvantaged students, but also that the programs would eliminate much of the large academic achievement gap observed between children of the poor and their more fortunate counterparts. Head Start and Title I were intentional attempts to address the gaps in educational attainment among various economic, ethnic, language, and disability subgroups. During the Johnson Administration, key shapers of these programs labeled them as Follow Through programs. These programs were originally intended to be an extension of the federal Head Start program, which delivered educational, health, and social services to typically disadvantaged pre-school children and their families. The function of the Follow Through programs was to provide a continuation of services to students in their early elementary years as a way to help prepare children for school. Other stakeholders stressed the importance of their emphases on comprehensive health, social services, parent involvement, community empowerment, and improved job opportunities for poor parents and neighborhood residents (Vinovskis, 1999). The Follow Through programs

were the largest and most expensive experimental projects in education funded by the U.S. federal government.

Follow Through programing has since given way to the reauthorization of the Elementary and Secondary Education Act of 1965 as the No Child Left Behind (NCLB) Act of 2001. On January 8, 2002, President Bush signed into law the federal No Child Left Behind Act of 2001. Among other important features, the law dictated that states should publish achievement results separately for racial and ethnic groups and work to alleviate inter-group disparities. Thus, for the first time in the nation's history, raising achievement levels among racial and ethnic minorities and closing achievement gaps were explicit goals of federal policy (Ferguson, 2002). To address NCLB and Race to the Top legislation, state education leaders and governors in 48 states came together to develop the Common Core State Standards (CCSS), a set of clear college-and career-ready standards for kindergarten through 12th grade in English language arts, literacy and mathematics. Today, the District of Columbia and most states, excluding Alaska, Indiana, Nebraska, Oklahoma, South Carolina, Texas and Virginia have voluntarily adopted and are working to implement the standards, which are designed to ensure that students graduating from high school are prepared to take credit bearing introductory courses in two- or four-year college programs or enter the workforce (Gibbs, 2000).

More recently, in December of 2015, President Obama signed the Every Student Succeeds Act (ESSA) into law. This measure reauthorized the 50-year-old Elementary and Secondary Education Act (ESEA), the nation's national education law. The new law builds on key areas of progress in recent years under NCLB legislation and is specifically focused on improving high school graduation rates and numbers of students attending college. While the reauthorization of ESEA and the enactment of NCLB and later ESSA would appear to be steps in the right

direction they come at a cost. Accountability for both NCLB and ESSA comes in the form of high-stakes standardized tests. According to Au (2011), while the use of standardized testing in education in the US has been relatively consistent since the early 1900s, it has only been in the more recent decades where their use has risen to dominance such that, within modern day systems of educational accountability, high-stakes, standardized testing in mathematics and reading/language arts is now the central accountability tool used for education reform. (Au, 2011).

However, are test scores all that matter or could our preoccupation with test scores be producing classroom conditions that actually undermine student learning? Accountability legislation such as NCLB and ESSA raise serious questions when analyzed in terms of the effects on students, the very ones the laws intend to help. Au (2011), reported that in a nationwide survey of 349 school districts it was found that 62 percent of districts reported increased instructional time devoted to the tested subjects of math and English/language arts in elementary schools. At the secondary level it was reported that 71 percent of the districts cut at least one subject to increase time spent on reading and math. In this way, high-stakes testing is having the net effect of standardizing the content of the curriculum in teacher's classroom practices.

Ultimately, is accountability legislation getting in the way of other educational goals such as social growth, long-term learning, development of socialization skills, and student-teacher relationships? When assessment becomes high-stakes and when teacher evaluation and compensation are in part determined by student achievement and growth data, teachers often focus their attention on the knowledge and skills the tests measure, leaving less time to engage students in conversations about personal issues or those that help them feel valued and supported

(Stipek, 2006). Critics of accountability legislation have suggested that these telescoping effects reduce the abilities of teachers to spend time on key student-teacher relationship building activities and thus get in the way of achieving the goals the legislation was aimed to address.

High-stakes testing, which relies on rewards, such as teacher performance pay, and punishments, such as assigning letter grades to schools to increase scores, creates a system that is unfair as well as destructive to learning (Kohn, 2000b). Teachers infrequently attend to children's social and moral development by holding class meetings, building a sense of community, allowing time for creative play, and developing conflict resolution skills when the most emphasized outcome is scores on tests that do not measure any of these classroom features.

As a school administrator, I have noted that teachers who have deeper student-teacher relationships also have higher engagement, fewer behavior management problems, and better student achievement gains on formative, summative, and high stakes achievement assessments. To that end, I have observed these same teachers use student-teacher interaction opportunities, including student-teacher conferencing and tutoring and/or small group work time, to engage in relationship building with students. According to Pianta (2000), the key to improving student achievement is to pay attention to adolescent development as it is the positive relationships and sense of belonging that may give children the comfort, confidence, competence, and motivation to learn. Research conducted by Pianta (2000) established theories of social development that can be used to understand how social processes in classrooms, more specifically relationships between teachers and children, can be enhanced. These student-teacher interactions included making eye contact, projecting a relaxed body position, smiling, using positive verbal expressiveness, using proximity that enhances closeness to students, using nonverbal interaction with students. These practices were in juxtaposition to simply giving students achievement

results in the form of a grade or percentile without any context to understanding growth gained or lost by the child (Teven, 2001).

A teacher's immediacy behaviors of facial expression, gaze, posture, and other body movements provide the student with valuable information about his or her emotional state, attitude toward the students, and familiarity or ease with the instructional format (Teven & McCroskey, 1997). The way a teacher moves, stands, gestures, and uses eye contact and vocal inflection also makes a statement to the class about how the teacher feels toward the subject matter and the very act of teaching, as well as how the teacher feels about the students.

Child competence is often embedded in and a property of relationships with adults; and these relationships are critical regulators of development by forming and shaping it. In the early years, relationships with adults, primarily parents, child-care providers, or other family members, form the infrastructure of development that supports nearly all of what a child is asked to do in school, such as relate to other people, be persistent and focused, stay motivated to perform, be compliant-assertive, communicate, and explore the world (Pianta & Stuhlman, 2004).

Children need caring relationships with an adult as much as they need computers or books (O'Neil, 1997). Simply stated, educators need to put as much emphasis on the human interaction that builds or encumbers student-teacher relationships in the classroom as they do on standardized achievement preparation and testing. Hamre and Pianta (2001), utilizing the Student-Teacher Relationship Scale survey, established a process to measure a teacher's perception of his or her relationship with a particular student. More specific to this research project and what the literature does not reveal is how a child perceives his relationship with his teacher. Additionally important is to explore the correlation between how the child perceives a

relationship with the teacher and how that teacher perceives the relationship with the student, as well as how this student-teacher relationship influences student achievement.

Lastly, it is vital to note that under ESSA states are allowed at least one alternative indicator of school quality, student successes and/or teacher successes. One example of an alternative measure would be the Student-Teacher Relationship Survey (Hamre & Pianta, 2001), which could be administered in conjunction with state-mandated achievement testing to identify the correlation between student-teacher relationships and student achievement. With this knowledge, an educator could identify which teacher characteristics build or encumber student-teacher relationships and could develop specific recommendations for teacher professional development in the area of student-teacher relationships.

Statement of the Problem

Student-teacher relationships have become more challenging to develop in the current era of achievement testing and subsequent accountability measures. There appears to be less time for teachers to help students learn the behavioral characteristics necessary for relationship building. When tests become high-stakes, teachers focus their attention on the knowledge and skills the tests measure leaving less time to engage students or make them feel valued and supported (Stipek, 2006). Feeling pressured to produce higher test scores, teachers become more controlling and less patient particularly with students who lag behind. Ironically, these effects of NCLB get in the way of achieving the very goals the law aims to promote. To promote high academic standards, teachers need to create supportive social contexts and develop positive relationships with students (Stipek, 2006).

The President and Congress had high expectations for legislated educational programing such as Head Start and Title I under ESSA. They hoped that the programming would help

disadvantaged students and eliminate the academic achievement gap observed between children from poverty and their more fortunate counterparts (Vinovskis, 1999). Follow Through programing has emphasized curriculum standards, achievement testing, and accountability. However, according to Comer (2005), "Many improved practices in education that have been developed over the past two decades have been less successful than they might have been because they focused primarily on curriculum, instruction, assessment and modes of service delivery" (pg.758). Not enough attention has been paid to child and adolescent development (Comer, 2005). When these matters are addressed at all, according to Comer (2005), the focus is often on the student problem behavior and not on how to create a positive relationships with students. For many children, academic learning is not a main, natural, or valued task. It is positive relationships and sense of belonging that a good school culture provides that gives students the confidence and motivation to learn (Comer, 2005). What may be missing in Follow Through programing is the very thing that drives student motivation to learn in the first place and that is learning is driven by human interaction that relies on verbal and non-verbal avenues of communication between the student and teacher (O'Neil, 1997). Improved student-teacher relationships may be the missing link in ensuring that all students are successful.

Purpose of the Study

The purpose of this study was to learn if there was a correlation between student-teacher relationships and student achievement. The study analyzed how teachers rated themselves on the Student-Teacher Relationship Scale (STRS) Survey, which measures the three different relational constructs of Closeness, Conflict and Dependency, of a teacher's perception of his or her relationship with a student (Pianta & Stuhlman, 2004). The teacher ratings were then correlated with their student's growth in standardized achievement scores measured by pre- and

post-test scores on the STAR Reading assessment. Next, the study compared how teachers rated themselves with the ratings of their students on the Student-Teacher Relationship (STRS) Survey. The study also aimed to contribute to the field of education by developing recommendations for teacher professional development in the area of student-teacher relationships. In summary, the primary purpose of the study was to examine the association between student-teacher relationships and student achievement.

Research Questions

The research questions that guided this study were as follows:

1. What is the correlation between teacher perceptions of student-teacher relationships, as measured by the Student-Teacher Relationship Scale (STRS) Survey, and the growth in student standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment?
2. What statistical differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with their teachers on the same student-teacher relationship survey, as measured by the Student-Teacher Relationship Survey?

Significance of the Study

The connection between teacher effectiveness and student outcomes plays an integral role throughout the educational life of a child (Hanushek & Rivkin, 2010). "The difference between being taught by an effective teacher and non-effective teacher can translate into the gain or loss of a full grade level of achievement in a single school year" (Borman & Kimball, 2005, p. 3). Furthermore, having one negative experience with a teacher could have consequences lasting for several years. Considering this evidence, it stands to reason that having an effective teacher in

front of every child is the pathway to improving student achievement on a broad scale. However, determination of which attributes enhance teacher effectiveness is presently under debate by educational leaders and researchers (Milanowski, 2004).

Raising student achievement should not rely only on the implementation of governmental law making, regulation, or policy such as the ESSA, NCLB, Race to the Top, or state level teacher evaluative and accountability measures. While they are important guardrails to ensure educator accountability in the implementation of state or national standards, accountability legislation such as NCLB and later ESSA should not in themselves be the central, singular, or only applied method for improving student achievement (Comer, 2005). Rather, there is the need to foster relationships between students and their teachers as learning can't take place until there is a significant relationship in place first. Thus, one key to noteworthy learning is connecting students with teachers who support them not just as learners, but also as people.

To promote achievement of high academic standards, teachers need to create supportive social contexts and develop positive relationships with students (Stipek, 2006). High-quality relationships have been connected to a number of important academic and social outcomes. Improving student-teacher relationship quality is a critical component of education, as children do not enter the academic arena with equal chances of developing high-quality relationships with teachers (Jerome, Hamre, & Pianta, 2008). When teachers share a strong positive relationship with students, it can provide motivation for the teacher to spend extra time and energy promoting student success. In contrast, teacher-child relationships characterized by conflict may lead to frequent attempts to control children's behavior and thus hinder efforts to promote a positive school or classroom environment for them. Therefore, children who form positive relationships with their teachers have an advantage when compared to those students who struggle to develop

good relationships. This may be the reason why negative student-teacher relationships are related to efforts to exclude children from the classroom (Hamre & Pianta, 2001). A good predictor of how well students achieve in a teacher's class is their perception of and affect for the teacher (Teven, 2001). In order to maximize learning, it would be important for teachers to develop a good relationship with their students, because the understanding established between students and teachers, could determine the interest level of students.

A number of important academic and social outcomes have been linked to high-quality student-teacher relationships (Stipek, 2006). In future research, it would be worth identifying relationship building characteristics that would assist teachers in building relationships with students and would be a strong companion to current content area knowledge and teaching pedagogy professional development.

The first goal of this research project was to establish if there was a correlation between how a teacher perceived the relationship with a child and how the child perceived that relationship with their teacher. The final outcome of this research project was to establish the association between student-teacher relationships and student achievement.

Delimitations

Participation in this study was delimited to teachers who were rated as Highly Effective and nominated by their principal as strong student-teacher relationship builders who teach in third grade in a Metropolitan public school district in the state of Indiana. The study was delimited to examination of student and teacher survey results and student reading achievement testing results. These delimitations may limit the generalizability of the results to other educational settings.

Theoretical Framework

According to Hajovsky, Mason, McCune and Turek (2017), "Supportive student-teacher relationships are a critical factor in creating and maintaining a sense of school belonging that encourages positive academic and behavioral outcomes" (pg. 177). Grounded in attachment theory, a psychological model that describes the dynamics of long-term and short-term interpersonal relationships between humans, the importance of early relationships in building children's working models of the world and subsequent relationships with others is stressed (Hajovsky et al., 2017). While initial work in attachment theory focused on the mother-child relationship, student-teacher relationships have also been investigated with an emerging view that a caring and supportive teacher can make similar and meaningful impacts in shaping student outcomes.

Relationships between children and adults play a prominent role in the development of competencies in the preschool, elementary, and middle school years (Pianta, 2000). They form the developmental infrastructure on which school experiences build. Considerable evidence shows that child-adult relationships play an important role in the adaptation of the child within a given context such as the home or classroom. According to Pianta (2000), child-parent and student-teacher relationships play important roles in developing skills in the areas of peer relationships, emotional development, self-regulation, motivation, problem solving, and self-esteem.

The student-teacher relationship has typically been viewed as consisting of three primary dimensions: closeness, conflict and dependency. Closeness represents the warmth and positive affect between the teacher and the child and the child's comfort in approaching the teacher; whereas conflict refers to the negativity or lack of dyadic relationship (Hamre & Pianta, 2001).

Dependency represents the degree to which a teacher perceives a particular student's overreliance on him or her and strong reaction to separation from the teacher (Pianta, 2001). Consequently, research in public schools has increasingly focused on the role of supportive relationships with teachers as a salient variable related to student outcomes (Mason et al., 2017). It would serve educators well to understand how relationships form in the early years of a child's life. If a child is not afforded positive attachment relationships early in life, it could result in avoidant or ambivalent social-emotional outcomes that could encumber future student-teacher relationships.

Theoretical Orientation

Pianta (2001) developed the Student-Teacher Relationship Scale (STRS) Survey, which is a teacher reported measure of the quality of the teacher's relationship with a child. The STRS was used as the teacher and student survey instrument. The student survey was created using the STRS teacher survey as a guide. Each question on the student survey is a direct reflection of the corresponding numbered teacher question/s except that the student question was written in a manner to be more comprehensible by students.

According to the review of the literature in Chapter 2, school policies that support building positive relationships between teachers and students contribute pointedly to the social emotional health and well-being of students and their academic performance (Teven, 2001). Knowing what to pay attention to in terms of developing student soft skills, defined as the informal aspects of school social and interactional nonacademic needs such as relationship building, are key components in schools' efforts to meet the provisions of accountability legislation. The focus on student performance created by the NCLB and more recently under ESSA, as well as state accountability policies, must not divert teachers from attending to

influences that substantially affect how well students perform. The most difficult to reach students will often work harder and persist longer for a teacher who demonstrates genuine caring for them as individuals and commitment to their success (Osterman, 2000). Further, curricular, instructional, and assessment activities are best facilitated by good relational and development conditions, and these conditions can be achieved by joining relationship development principles and practices with pedagogy (Comer, 2005). Thus, discovering which teacher characteristics reduce conflict and dependency while increasing closeness in a student-teacher relationship would help schools design teacher professional development activities that would lead to establishing building-wide environments that promote student caring.

Definitions

The following terms defined here are used periodically throughout the study.

Authenticity. Feeling a sense of freedom and openness that enables a person to be a unique person in honesty and genuineness.

Characteristic. A distinguishing quality, attribute, or trait (Teven, 2001).

Closeness. The degree to which a teacher experiences affection, warmth, and open communication with a particular student (Pianta, 2001).

Conflict. The degree to which a teacher perceives his or her relationship with a particular student as negative, unpredictable, and conflictual (Pianta, 2001).

Dependency. The degree to which a teacher perceives a particular student's overreliance on him or her and reacts strongly to separation from the teacher (Pianta, 2001).

Disposition. The tendency to act or think in a particular way. Dispositions are defined as the values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as

the educator's own professional growth. Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice (Gargani, Hacifazlioghu, & Stronge, 2011; Singh & Stoloff, 2008; Usher, 2003).

Empathy. Seeing and accepting the other person's point of view.

Meaningful purpose and vision – committing to purposes that are primarily person centered, broad, deep, freeing, and long range in nature.

Immediacy. Communication behaviors such as eye contact, gestures, relaxed body positions, smiling, verbal expressiveness, and proximity that enhance closeness to and nonverbal interaction with a student (Teven, 2001).

Perceived caring. The construct of perceived caring is similar to the construct variously labeled good will or intent toward the receiver (Teven, 2001).

Characteristics of effective teachers (Singh & Stoloff, 2008; Teven & McCroskey, 1997; Usher, 2004).

Positive view of others. Believing in the worth, ability, and potential of others.

Positive view of self. Believing in the worth, ability, and potential of oneself.

Soft skills. Social emotional well-being and ability to communicate, problem solve, and get along with students and professional peers in the classroom and/or workplace (Stipek, 2006)

Value added measures. Using student achievement data to determine in part or in whole teacher evaluation and compensation (Milanowski, 2004; Stronge, Gargani & Hacifazlioglu, 2011).

Organization of the Study

This study contains five chapters and also includes references and appendices. Chapter Two reviews the literature regarding student-teacher relationships, perceived caring, teacher characteristics that build and encumber relationships, and the association they have with student

achievement. Chapter Three defines the research design and the methods used for this study. The results are presented in Chapter Four, and Chapter Five shares the conclusions drawn and future recommendations for research.

Summary

In summary, integrating the formal side of schooling (defined as the instructional and curricular aspects of school) with the informal aspects of school (defined as social and interactional) can lead to higher and more equitable achievement among students (Burchinal, Clarke-Stewart, Crosnoe, Friedman, Keating, Morrison, & Pianta, 2010). However, such efforts to educate children can solve systemic inequities only so far. Promoting soft skills, the social emotional well-being and ability to communicate, problem solve, and get along with students, may be even more important in an era of accountability. The focus on performance created by federal and state accountability policies must not divert teachers from attending to influences that substantially affect how well students perform. The-most-difficult-to-reach students will often try harder for a teacher who demonstrates caring for them as individuals and commitment to their success (Stipek, 2006). School policies that support positive relationships between students and teachers can contribute pointedly to the social emotional health and well-being of students and in turn to their academic performance as well (Pianta, 2000). Knowing what to pay attention to in terms of students' nonacademic interactional needs, such as relationship building, is a key ingredient in schools' efforts to meet the provisions of federal and state accountability legislation. Discovering which teacher instructional and behavioral characteristics lead to significant relationships between students and their teachers is an integral component in establishing caring and supportive classroom environments that can promote higher student achievement and be more resistant to the pressures of high stakes achievement testing.

CHAPTER TWO: REVIEW OF THE LITERATURE

In a review of relevant literature, there have been numerous studies that have analyzed the value added of teacher's influence on student achievement scores, but fewer empirical studies have addressed how student-teacher relationships contribute to student achievement or what highly effective versus non-effective teachers do differently in the classroom (Gargani, Hacifazlioghu, & Stronge, 2011). This could be a contributing factor to the problem statement of this study and a gap in the literature that this study was designed to fill. The developmental benefits of relationships with teachers who provide high levels of support and low levels of conflict and dependency are well documented in research. This chapter focuses on a literature study of enhancing student-teacher relationships, teacher effectiveness, student-teacher relationship building, teacher classroom behaviors and student-teacher relationships, student-teacher relationship characteristics of perceived caring, teacher misbehaviors and creditability, and enhancing student-teacher relationships.

Enhancing Student-Teacher Relationships

According to Pianta (2000), in almost every theoretical consideration of child development, an effective attachment develops as a consequence of early patterns of interaction that afford children a sense of security in the context of a relationship. Further, relationships between children and adults play a prominent role in the development of competencies in the preschool, elementary, and middle school years and form the developmental infrastructure on which school experiences build. Longitudinal studies have found that a positive relationship with one's teacher predicts improvements in children's cooperation and engagement in the classroom, peer acceptance, and academic achievement (Hughes, 2011). Student engagement and academic achievement often are viewed as individual student attributes or traits but not as

outcomes of how teachers structure their teaching. Seeking to move beyond teacher demographics and credentials as predictors of student engagement and performance which have limited associations with student success, researchers are focusing their efforts on examining student-teacher interactions or classroom social processes that promote student outcomes (Brackett, Reyes, Rivers, Salovey, & White, 2012). Considerable research suggests that students work harder, feel more engaged and connected to school, are more intrinsically motivated, and achieve academically at higher levels when they believe that their teachers understand and care about them (Algina, Ashton, & Marshik, 2017).

Conversely, students whose relationships with teachers are characterized by conflict are more likely to be retained in grade, to experience peer rejection, and to demonstrate an increase in externalizing behaviors. Moreover, the benefits of a supportive, low conflict relationship with one's teacher are important from the earliest school years and can predict long-term achievement (Hughes, 2011). A warm and supportive teacher relationship may provide a child with a sense of security that promotes the child's free and active participation in classroom learning activities. Supportive teacher-student relations are a critical factor in creating and maintaining a sense of school belonging that encourages positive academic and behavioral outcomes.

Early relationships are important in building children's working models of the world and subsequent relationships with others. Children who experience social support from teachers will construct a positive sense of school membership and academic self-concept that will promote greater effort, persistence, and commitment to school norms (Hajovsky et al., 2017). Teacher social support also promotes emotional security with one's teacher that reduces a child's stress reactivity to negative teacher and peer events in the classroom (Little & Kobak, 2003). Finally, teachers who are adept at creating a positive social-emotional climate provide more responsive

and sensitive instruction (Hughes, 2011). Recent research suggests that children's social relatedness in the primary grades may establish patterns of social engagement and motivation that have long-term consequences for their academic motivation and achievement (Hughes & Kwok, 2007). Close teacher-student relationships enable the teacher to provide a more responsive and sensitive positive social-emotional climate, which provides for more responsive instruction and better organized classrooms.

Teacher Effectiveness and Student-Teacher Relationship Building

In order to account and measure for the impact that increased student-teacher relationships can yield, it is important to also consider teacher effectiveness research as it relates to student achievement in this era of accountability. If high quality student-teacher relationships increase student engagement and that leads to increased student achievement, then it will be important to measure that gain.

The National Council for Accreditation in Teacher Education defines the characteristics of effective teachers as: empathetic, positive view of others, positive view of self, authenticity and meaningful purpose. More specifically, effective teachers demonstrate the values, commitments, and professional ethics that influence teacher interactions with students, families, colleagues, and communities and affect student learning, motivation and development as well as an educator's own professional growth (Usher, 2004).

Research in the area of teacher evaluation continues to find large differentiations in student achievement gains across a teacher's classroom. This variability in teacher effectiveness raises the stakes on identifying effective teacher instructional practices, and more importantly positive teacher behavior characteristics while in front of the students. Children who perceive their teachers as offering warmth, acceptance, and self-esteem validation are more likely to

perceive themselves as academically capable and belonging to school. Presumably, such a positive school identity promotes commitment to school and motivates engagement in learning (Hughes, 2011).

The student-teacher relationship has been investigated with the emerging view that a caring and supportive teacher can make similar, meaningful impacts in shaping youth outcomes (Hajovsky et al., 2017). During the early school years, teachers may assume a parent-surrogate role with the children they teach and may develop a relationship with the child that has considerable importance (Pianta, 2000). Students who enjoy a close and supportive relationship with a teacher are more engaged in that they work harder in the classroom, persevere in the face of difficulties, accept teacher direction and criticism, cope better with stress, and attend more to the teacher (Hughes & Kwok, 2007). This makes sense given the variables often associated with student achievement such as socioeconomic status, free lunch, or mobility are largely outside the bounds of what a teacher or school can address. However, relationships with classroom teachers represent a logical and pliable realm of investigation (Mason et al., 2017).

Ultimately, there remains much work to be done in this area in order to understand what classroom instructional behaviors and teacher characteristics foster strong student-teacher relationships, which teacher actions detract from student-teacher relationships, and how the teacher's behaviors and characteristics relate to student achievement.

Teacher Classroom Behaviors and Student-Teacher Relationships

Teacher effectiveness need not be measured based on student achievement gains alone. Rather, it should be possible to build a research project that incorporates categorizing the student-teacher relationship constructs that teachers exhibit when interacting with students. According to Hamre & Pianta (2001) these constructs include: conflict (the degree to which a

teacher perceives a relationship with a student as negative, unpredictable and conflictual), dependency (the degree to which a teacher perceives a student's overreliance on him or her, and one where the student reacts strongly to separation from the teacher), and high levels of closeness (the degree to which a teacher experiences affection, warmth, and open communication with a student). Additionally, holding high expectations for students, holding students accountable, and other observable student-teacher relationship characteristics, specifically, those observed while in the act of teaching, have been found to be key indicators found among teachers whose students received higher scores on measurements of achievement (Milanowski, 2004).

However, classroom effectiveness is an elusive concept to define when considering the complex process of teaching and the many contexts in which teachers work (Stronge et al., 2011). In fact, there is considerable debate as to whether educators should evaluate teacher effectiveness based on teacher inputs, qualifications, the instructional component or teaching practices, the product of teaching such as student outcomes, or a composite of all these elements in which instructional delivery alone is defined categorically as six interrelated areas: instructional differentiation, focus on learning, clarity, complexity, expectations, and use of technology (Stronge et al., 2011). Additional components are ongoing assessment, the learning environment, and the personal qualities of the teacher. Stronge et al. (2011) defined effective teaching in terms of outcomes, stating that outcomes measure a crucial consideration in effective teaching, but outcomes do not measure the process, or instructional characteristics, that results in increased student achievement.

More than three decades ago, researchers including Hanushek (1971), Murnane, and Phillips (1981) began reporting large differences in student achievement gains in different

teachers' classrooms. This work, along with new research on teacher effectiveness, has undergone resurgence in recent years due to increased teacher and school accountability found in NCLB and ESSA legislation. For example, the competitive application for Race to the Top funds led to financial rewards for states that satisfied certain educational policy criteria, such as performance-based standards for teachers and principals, compliance with Common Core State Standards, lifting caps on charter schools, increasing school vouchers, and turning around low performing schools. These findings, when combined with increasing educator accountability and international competition, have produced a flood of policy proposals to improve teacher quality and effectiveness.

Despite this outpouring of interest, little has changed in the way that teachers are evaluated, compensated, or trained or in the type of professional development opportunities offered (Kane, Taylor, Tyler & Wooten, 2011). Little has been done to categorize which teacher instructional behaviors and characteristics lead to increased student achievement. It is unclear how impactful the student-teacher relationship is in terms of raising student achievement. What are the teacher behaviors that show a student the teacher cares for them? According to Stipek (2006), caring teachers allow for student autonomy and opportunities for decision making by giving students choices in assignments, engaging them in developing classroom rules, and encouraging them to express their opinions in classroom discussions. Additionally, caring teachers prompt positive relationships in young children by listening to their concerns, responding to transgressions gently and with explanations rather than with punishment, as well as showing positive behavior characteristics such as smiling or being playful (Pianta, 2000). Furthermore, when young children were asked how they know that their teachers care, they refer to teachers being attentive, such as greeting them in the hallway; addressing their nonacademic

needs, such as having a snack for them during snack time; or being fair, such as making sure all students get a turn. It can also be that a teacher listens to them or hears the counter story when they get in trouble. These behaviors can signal to a child that the teacher is showing care and being fair (Osterman, 2000).

Is the effort it takes to build student-teacher relationships worth the time in this era of accountability? Consider that adolescents report that they work harder for teachers who treat them as individuals and express interest in their personal lives outside school (Osterman, 2000). Learning takes effort, and one of the best predictors of student effort and engagement in school is the relationships they share with their teachers.

Are certain students more or less at jeopardy of failure if a significant relationship is not present between them and their teachers? The social dimension of classrooms may be particularly important for vulnerable youth. When researchers asked students who had dropped out of high school why they had left school, they frequently said it was because no one cared (Stipek, 2006). Conversely, those who remained in school stated that they had a meaningful relationship with an adult or multiple adults who showed an interest in them as individuals. Students reported that being a caring and supportive teacher does not mean pampering. Rather, it means holding students accountable while providing the support they need to succeed, communicating directly and regularly with them about their academic progress, and making sure they understand what has been taught (Stipek, 2006).

Unfortunately, teachers often favor and develop more personal, supportive relationships with high-achieving students than with low-achieving students, and tracking only magnifies this effect (Hajovsky et al., 2017; Oakes, 2005). It is no wonder then that students who struggle academically typically have the worst relationships with their teachers (Stipek, 2006). To

counteract poor student-teacher relationships, teachers must go out of their way to compliment positive behaviors, show an interest in the students' lives outside of school, and listen to the students' perspectives on the problems they are having; effective teachers do not just stand and deliver instruction.

Another key teacher relationship characteristic is how the teacher communicates a passion for learning. Many adolescents view teacher passion as evidence of a caring teacher and how that alleviates some of the pressure for learning that is created by educational mandates such as NCLB and ESSA. More specifically, caring teachers press students to learn by encouraging them, paying attention to their work and giving constructive feedback, refusing to accept halfhearted efforts, providing assistance when students need it, and refusing to give up on students (Stipek, 2006).

Student-Teacher Relationships and Characteristics of Perceived Caring

A teacher's classroom behavior is constantly under scrutiny by students. As a result, students learn a great deal from a teacher's nonverbal immediacy behavior. Nonverbal immediacy is a term used among communcation researchers to describe nonverbal behaviors that communicate a positive evaluation of others or positive affect toward others (Teven, 2001). These behaviors typically include a teacher's facial expression, eye contact, gestures, relaxed body position, smiling, verbal expressiveness and proximity, posture, and other body movements that provide the student with valuable information about the teacher's emotional state, attitude toward the students, and familiarity or ease with the instructional format (McCorskey & Teven, 1997). Students determine how a teacher feels about them by observing the teacher's communication behaviors. The way a teacher moves, stands, gestures, and uses eye contact and

vocal inflection makes a statement to the class about how the teacher feels towards the subject matter and the very act of teaching, as well as how the teacher feels about the students.

A good predictor of how well students do in a teacher's class is their perception of and affect for the teacher. In order to maximize learning, it is essential for teachers to develop a good relationship with their students, because the rapport established between teachers and students impacts the interest and performance level of the students (Teven, 2001). Teaching is a personal relationship involving the interaction of teacher and student personalities. A vital requisite to effective teaching is establishing a climate of warmth, understanding, and caring within the classroom. Not only do caring teachers tend to produce greater achievement gains on the part of their students, but they also tend to produce better affective responses from their students and have more positive classroom atmospheres (Teven, 2001). Additionally, Hughes and Kwok (2007) found that consistent with the central role of social relatedness in students' academic motivation and performance, early elementary students achieve more when they and their parents experience supportive relationships with teachers. Specifically, in the last twenty years, a substantial body of research has accumulated which points to the important role that teacher immediacy behaviors play in the enhancement of students' affective learning (Teven, 2001). More recently, research has revealed that a caring school climate produces a decrease in disruptive student behavior and an increase in academic success (Comer, 2005). However, that same research falls short of clearly identifying the teacher instructional behaviors that lead to a perceived sense of teacher caring by the students (Hughes & Kwok, 2007). This is further evidence that there is gap in determining what characteristics or teacher behaviors lead to or encumber student-teacher relationships; and therefore, further study is warranted.

Researchers have identified several factors that lead students to perceive the teacher as caring about their welfare; these include empathy, understanding, and responsiveness (Teven & McCorskey, 1998). It would be prudent to build on this work and pay particular attention to the presence or lack thereof these teacher characteristics.

Teacher Misbehaviors and Credibility

It is worth noting the need to conduct research about what kinds of teacher misbehaviors disrupt the students' perceptions of caring. Socio-communicative style (e.g., assertiveness and responsiveness) and verbal aggressiveness are very important predispositions underlying the interpersonal communication process that may have strong effects on students' perceptions of teacher caring (Teven, 1998). Additionally, in future research, greater attention should also be paid regarding the relationship between perceived caring and nonverbal immediacy. These behaviors typically include looking toward someone, leaning toward someone, touching someone in a non-threatening manner, sitting near someone, smiling, and speaking in an animated way (Teven, 2001). Why does this matter? Research has demonstrated that the more a communicator employs immediacy behaviors, the more others will like, evaluate highly, and prefer that communicator. Nonverbal immediacy is also positively correlated with perceptions of communicator competence, goodwill, and trustworthiness, which all are characteristics of credibility. The relationship between perceived caring and affective learning suggests that the nonverbal immediacy behaviors of teachers may be what is cuing students' perceptions of teacher caring. Teachers who dedicate time each day to creating a classroom with a high degree of emotional caring are sensitive to students' needs, share warmth, show caring and nurturing, and take student perspectives into account while refraining from using sarcasm and harsh disciplinary practices. Further, such classrooms are ones in which the teacher fosters student

comfort and enjoyment by regularly expressing warmth toward, respect for, and interest in students and by encouraging their cooperation with one another (Reyes et al., 2012).

In contrast, classrooms with negative emotional climates are ones in which teachers and students share little emotional connection and regularly disregard, disrespect, taunt, humiliate, threaten, or even physically lash out at one another. Teachers in such classrooms do not design or present lessons with students' perspectives or cognitive capabilities in mind, nor do these teachers divert from a lesson plan when students' boredom, discomfort, or confusion arises. A neutral emotional climate classroom is characterized by teachers and students who provide inconsistent regard for each other. The teacher may be moderately warm, respectful, and aware of students' emotions but also may be controlling or dismissive at times. Students in these classrooms sometimes share with and assist one another, or laugh and smile with their teacher; but at other times, they are insensitive and uncertain about how to approach the teacher (Reyes et al., 2012).

Additionally, teachers who used direct verbal expressions of discouragement and/or dislike towards their students were perceived significantly more non-caring than those instructors who displayed empathy and who responded positively to students. More work in this area revealed that instructors who used verbally aggressive messages were perceived by students as less competent, less immediate in their response, and less appropriate than those who did not use verbal aggression (Teven & Gorham, 1999). Baringer and McCorskey (2000) found that teachers who were more immediate in their response were seen as less verbally aggressive; and teachers who were more verbally aggressive were perceived as less immediate. This finding raises a question regarding the extent to which teacher verbal aggression is negatively associated with student perceptions of teacher caring. This last question is directly related to the second

research question of this study, which explores differences in how teachers perceive their relationship with students to how their students perceive their relationship with their teachers. Finally, according to Reyes et al. (2012), accumulating evidence has suggested that when teachers create a sense of community, respond to students' needs, and foster positive relationships, academic achievement likely improves, perhaps because students are more engaged and enthusiastic about learning.

Enhancing Student-Teacher Relationships with At Risk Students

In his book, *Enhancing Relationships*, Robert Pianta (2000) asserted that theories of social development can be used to understand how social processes in classrooms can be enhanced, specifically relationships between teachers and children. Pianta described theories on the social impoverishment of high-risk children and linked them with practices designed to reduce risk by addressing relationships between teachers and children. To qualify the "at risk" label, Pianta (2000) noted that most often the term "at risk" is used as a labeling device to describe individual children. In this way, risk is just another way of labeling a problem. The wider context in which risk is used is the context of preventions, and this use is a more helpful way for educators to consider the "at risk" label. Additionally, it has implications for focusing on child-teacher relationships as a preventive intervention in hopes of counteracting social consequences. Moreover, because adult-child relationships are a resource for development, strengthening these relationships in non-risk populations can have added benefits to development. In both risk and non-risk populations, a focus on enhancing student-teacher relationships can be expected to elevate competence levels and help lessen the rates of failure currently present in public schools.

It must be noted however that there are windows of opportunity with respect to the timing of interventions. Research conducted in the Baltimore City schools by Pianta (2000) followed a cohort of children from kindergarten through high school and post-secondary education and found that by the end of third grade, children's pathways through school are fairly set and it can be predicted how well a child will do in their later years (Pianta, 2000). In other terms, development in school becomes less pliable with respect to broad outcomes, such as failure and success; this suggests that the early school years are a sensitive period (Pianta & Walsh, 1998). This is a period in which the window of opportunity for influencing later outcomes is open and during which experiences will have disproportionate influence. It is an era or time in which significant positive or negative trajectories may occur; but all too often, the early school years are not a period in which developmental paths change (Pianta, 2000). Therefore, disrupting these deep-rooted relations is one of the central problems of early childhood education (Pianta & McCoy, 1997).

Regardless of a child's classroom difficulties or the intervention applied to meet those needs, relationships between teachers and children play a role in the identification of those problems and in the interventions delivered. Integrated efforts to improve the relationship between teacher and child will have the added benefit of improving the response to the intervention (Pianta, 2000). Therefore, even with children who already have considerable problems in school, there is a method for working through the child's relationships with adults.

Summary

In this time of school accountability where outcomes from high stakes achievement testing results in rewards and punishments, schools need every advantage possible to raise student achievement. This reality has driven a renewed interest in the social and emotional

aspects of learning or what could be considered soft skills. Soft skills have been defined by Comer (1997) as the social emotional well-being of students and the ability to communicate, problem solve, and get along with classroom peers and the teacher.

The reality is that a child's overall development, and not simply cognitive or intellectual development, is what makes learning possible. There are several components to that end: the cognitive, the affective or emotional, and the expressive. Additionally, researchers have reported that educators use different terms, but there is now clear understanding that the cognitive is only one dimension of intelligence (Pianta & McCoy, 1997). To be successful, one needs a threshold level of cognitive ability. This certainly may be true, but just as important is emotional intelligence, or the ability to identify and manage one's own emotions, as well as the emotions of others. Emotional intelligence, along with the soft skills of creativity, personal discipline, and the ability to relate to other people, combine to become the affective intelligence (Comer, 2005).

Not only is effective intelligence important to the school and classroom, but it plays a vital role in the workplace, which makes teaching effective intelligence in school all the more important. Comer (2005) suggested as evidence that we consider how we see examples of people in the work place who have outstanding cognitive skills but who flounder because they lack self-insight or have trouble working with others. Employers want employees who are able to think, take initiative, get along well with other people, solve problems, be disciplined and responsible (Comer, 1997). Yet, schools are encouraged to produce high test scores or face penalty. This accountability structure is motivating academic activity and driving the way schools are organized to overemphasize cognitive skills because they are more easily measured. High stakes mandated achievement testing that results in rewards or punishments to schools only further distances teachers from their students, decreasing opportunities for any meaningful

exchange to take place between teachers and their students. Instead, schools must focus on developing student skills in the realms of the social interactive (how to interact well with other people), the psycho-emotional (how to control your emotions or handle your impulsivity), the moral-ethical (knowing the difference between right and wrong), the linguistic, the intellectual-cognitive, and the physical as it is growth along all these pathways that facilitates intellectual academic growth (Comer, 2005). When developed together, student achievement improves and undesirable behavior decreases because social and emotional development and academic learning are intricately linked. However, some teachers are more emotionally intelligent than others. It is possible that teachers with high emotional intelligence are more in tune with student' needs and therefore more flexible in making the subject matter relevant to students. This suggests that academic success is contingent to some extent upon the emotional components of learning and motivation (Reyes et al., 2012).

In the final resolve, when fully focused only on achievement and the cognitive growth of children, teachers are unable to effectively communicate behaviors that positively impact relationships between students and teachers. Saft and Pianta (2001) found that educators often forget that, for many children, academic learning is not a primary, natural, or a valued task. It is the positive relationships and sense of belonging that a good school culture provides that give these children the comfort, confidence, competence, and motivation to learn. Ultimately, it comes down to a key action, and that is when the adults are interacting in a way that creates a climate where children feel comfortable, safe, and protected and where they can identify with and attach to adults (Comer, 2005). In years past, many researchers stated that there was a collective responsibility for children and that a sense of community provided a social and emotional support system for them. Students are more motivated and have higher achievement

when teachers support their psychological needs for autonomy, competence, and relatedness. However, teachers might have difficulty supporting their students' psychological needs if their own psychological needs are not met, which might affect students' need for satisfaction and ultimately their achievement (Algina, Ashton & Marshik, 2017). This fact only deepens the need for teachers to build a sense of community in their classrooms through student-teacher relationships. Curricular, instructional, and assessment activities are best facilitated in good relational and development conditions, and these conditions can be achieved by joining development principles and practices with pedagogy (Comer, 2005).

The job of a classroom teacher has become far more complex since the implementation of accountability legislation. One theme that was identified from the literature review was how high stakes mandated achievement testing might parenthetically distant teachers from their students. If true, will there be push back by those who understand that intellectual growth and social emotional development are interrelated? Although some studies of teacher effectiveness have identified teacher characteristics that build student-teacher relationships, they have not gone so far as to ascertain the relationship between the purposeful implementation of these characteristics and subsequent student achievement outcomes at the elementary school level. Throughout this review of the literature, a lack of information and research that directly related to how teachers build or encumber student-teacher relationships and how those relationships impact achievement testing was identified. Additionally, a synthesis matrix was created to identify major themes and patterns across multiple literature sources (Appendix A). The top of the matrix lists the various sources of comparison by author and the side represents the common themes or main ideas identified in the articles. In summary, in order to better understand the

behaviors and teacher characteristics that build or encumber student-teacher relationships, more in-depth information and research are necessary.

In the next chapter, the research methods used are described in order to gain a better understanding of the relationship between teacher perceptions of student-teacher relationships and student growth in standardized achievement scores (pre- to post- reading), as well as what differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with the teachers. Specifically, how can a teacher increase student-teacher closeness (instances of affection, warmth, and open communication), while promoting low dependency (overreliance on the teacher) and decreasing conflict (unpredictable negativity) between themselves and their students?

CHAPTER THREE: RESEARCH METHODS

This chapter describes the research methods for my study. It begins with a review of the study's purpose and research questions. The remainder of the chapter includes a descriptive detail of the research project study population, research design, instrumentation, data collection and analysis, assumptions, limitations, and chapter summary.

Purpose of the Study

The purpose of this study was to learn if there was a correlation between student-teacher relationships and student achievement. The study analyzed how teachers rated themselves on the Student-Teacher Relationship Scale (STRS) Survey, which measured the three different constructs of Closeness, Conflict and Dependency, of a teacher's perception of his or her relationship with a student (Pianta & Stuhlman, 2004). The teacher ratings were then correlated with their student's growth in standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment. Next, the study compared how teachers rated themselves with the ratings of their students on the Student-Teacher Relationship (STRS) Survey. The study also aimed to contribute to the field of education by developing recommendations for teacher professional development in the area of student-teacher relationships. In summary, the primary purpose of the study was to examine the association between student-teacher relationships and student achievement.

Research Questions

The research questions that guided this study were as follows:

1. What is the correlation between teacher perceptions of student-teacher relationships, as measured by the Student-Teacher Relationship Scale (STRS) Survey, and the growth in

student standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment?

2. What statistical differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with their teachers on the same student-teacher relationship survey, as measured by the Student-Teacher Relationship Survey?

Research Design

A quantitative design was selected because it is a means to summarize large amounts of data and reach generalizations based on statistical projections (Roberts, 2010). In this study, the phenomenon was the correlation between teacher perceptions of student-teacher relationships, student perceptions of student-teacher relationships, and standardized reading achievement scores. The data collected and analyzed in this quantitative study encompassed multiple data sources including student and teacher surveys and student achievement data.

A student-teacher relationship survey was administered in this quantitative study coinciding with the post administration of a standardized STAR Reading Assessment that was designed to show student growth throughout the year. The surveys were designed to assess conflict (degree to which a student-teacher relationship is negative, unpredictable, and conflictual), closeness (degree to which a teacher experiences affection, warmth and open communication with a student), and dependency (degree to which a teacher perceives a particular student's overreliance on them and how strongly the student reacts to separation from the teacher) between the teacher and students. The survey gauged the teacher's perception of his or her relationship with a student, a student's interactive behavior with the teacher, and a teacher's beliefs about the student's feelings towards the teacher. The student survey similarly gauged the

student's perception of his or her relationship with a teacher, a teacher's interactive behavior with the student, and a student's beliefs about the teacher's feelings toward the student.

Instrumentation

This section on instrumentation includes a teacher and a student survey, sample survey questions, a description of the Student-Teacher Relationship Scale, STAR Reading student assessment, survey administration protocol, and pilot study results.

Teacher Survey

The Student-Teacher Relationship Scale (STRS) Survey was administered to teachers in order to directly assess his or her relationship with a particular student in his or her class. It can be used with teachers of any age, experience level, or race/ethnicity. The STRS Survey can be completed for students in preschool through Grade 3, ages 4 through 8 years (Pianta, 2001). The purpose of the STRS Survey was discussed with the teachers participating in this study. Teachers needed to understand that the STRS Survey is used to assess the relationship he or she has with a particular student. Each teacher participating in the study completed a Student-Teacher Relationship Survey on every student in their classroom (e.g., a teacher might have completed 25 surveys). Completed STRS Surveys were collected and scored in accordance with the STRS Survey scoring procedure as defined in the STRS Survey Scoring Manual (Pianta, 2001). Included below are sample teacher survey questions. The entire teacher survey can be found in Appendix B.

Figure 1. Sample Teacher Survey Questions

1.	I share an affectionate, warm relationship with this child.	1	2	3	4	5
3.	If upset, this child will seek comfort from me.	1	2	3	4	5
8.	This child easily becomes angry with me.	1	2	3	4	5
10.	This child remains angry or is resistant after being disciplined.	1	2	3	4	5
15.	This child openly shares his/her feelings and experiences with me.	1	2	3	4	5

The Student-Teacher Relationship Scale (STRS) Survey is a 28-item self-report instrument that used a 5-point Likert rating scale to assess a teacher's perception of his or her relationship with a student, a student's interactive behavior with the teacher, and a teacher's beliefs about the student's feelings toward the teacher. Development of the STRS began in 1991; since then, the STRS has been normed on more than 1,500 students and 275 teachers distributed across seven states representing all regions of the United States. It has been shown to be psychometrically reliable and valid (Pianta, 2001). Prior to the first administration of STRS, the teachers included in this quantitative study were each given a STRS Training Manual for reference purposes, and then they participated in a 30-minute training session conducted by a licensed school psychologist so that they would be familiar with the purpose and have a general understanding of the survey tool. The STRS Survey was administered to the teachers and students near the end of the study to allow time for meaningful student-teacher relationships to form. Each teacher completed a student survey on every student in his or her classroom. The teacher rated the extent to which a particular item applied to his or her relationship with a particular student. The STRS Survey was then scored by summing groups of items corresponding to three factor-based subscales that capture three dimensions of student-teacher relationships: conflict, dependency, and closeness. By using raw scores from these three

subscales, a total scale score was obtained which assessed the overall quality of the relationship. A brief description of the STRS scale and subscales is provided in Table 5.

The rationale for using this survey was constructed upon the assumption that student-teacher relationships are based on attachment behavior patterns of teachers, and those patterns affect the attachment behavior patterns of students. The perception then would be the more that students perceive their teacher cares about them, the more the students will care about the class, and the more likely they will be to pay attention, and consequently, the more they will learn (Teven, 2001). The student survey consisted of a 28-item self-report instrument used to assess to each student's perception of his or her relationship with their teacher, specifically in terms of three dimensions of conflict, closeness, and dependency. To reduce item-reponse bias on both the teacher and student STRS Survey, four of the 28 scales on the instrument were reversed: Alpha reliability for this instrument was .90 (Pianta, 2001; Teven & McCorskey, 1996).

Table 1

Description of the Student-Teacher Relationship Scale (STRS) Survey and Subscales

Scale/Subscales	No. of Items	Description
Conflict	12	Measures the degree to which a teacher perceives his or her relationship with a particular student as negative and conflictual. High conflict scores indicate that the teacher struggles with the student, perceives the student as angry or unpredictable, and consequently the teacher feels emotionally drained and believes he/she is ineffective.
Closeness	11	Measures the degree to which a teacher experiences affection, warmth, and open communication with a particular student. High closeness scores indicate that the relationship is characterized by warmth, and the teacher believes he or she is effective because the student uses the teacher as a source of support. High closeness scores also reflect a greater sense of knowing on behalf of the teacher that the student is well and the student can effectively use the teacher as a resource.
Dependency	5	Measures the degree to which a teacher perceives a particular student as overly dependent on him/her. High dependency scores suggest that the student reacts strongly to separation from the teachers, requests help when not needed, and consequently the teacher is concerned about the student's overreliance.
Total	28	Measures a teacher's overall view of his or her relationship with a particular student. High Total scores suggest higher relationship quality. Specifically, Higher Total scores reflect a relative lack of conflict, lower dependency, and higher closeness.

Student Surveys

In surveying children, language ability is an important issue to consider. Since reading and language skills are still developing in middle childhood ages 7 through 12, it is necessary to ensure that students fully comprehend the questions. Extra attention should be paid to complexity of wording, negations, and logical operations (such as *and*, *or*) as children can be very literal. Additionally, depersonalized or indirect questions should be checked carefully (DeLueeuw, 2011). In general, during interviews of children, Borgers, DeLeeuw and Hox (2000) emphasized the importance of a well-designed protocol for open interview situations and the importance of explaining clearly what is expected of the child, as young children are very suggestible and can be reluctant to express their own thoughts or feelings because they assume the adult knows everything.

Additionally, attention was given to norming the student questions by having a team of five third-grade teachers, who were randomly selected from the group of 11 third-grade teachers who participated in the study, review the questions for appropriate grade level readability and to ensure student survey questions were asking the same as the teacher questions. The student survey questions were also analyzed using the Lexile reading scale (Appendix C). This reading scale is a popular method used by schools to measure the readability of text (Burdick, Sanford & Stenner, 2006). The appropriate readability range for third grade text is between a Lexile level of 620 and 820. The text in the student survey had a Lexile level of 620.

The survey was comprised of three major constructs: conflict, the degree to which a teacher or student perceives his or her relationship with a particular student or teacher as negative; closeness, the degree to which a teacher or student experiences affection, warmth, and open communication with a particular student or teacher; and dependency, the degree to which a

student or teacher perceives a particular teacher or student is dependent upon him/her. The total score measures a teacher's or student's overall view of his or her relationship with a teacher or student. High total scores suggest higher relationship quality. Specifically, higher total scores reflect a relative lack of conflict, lower dependency, and higher closeness (Pianta, 2004). The student survey was created using the STRS teacher survey as a guide. Each question on the student survey is a direct reflection of the corresponding numbered teacher questions except that I revised the student questions were to be more comprehensible by students. The student survey was field tested with a group of 20 third-grade students in a different school than the classrooms that participated in the case study. During the field test, the teacher left the room. Each question was read aloud to the group of students and time was allotted for questions. The students were then directed to answer the next question. Included herein are a few sample questions from the student survey. The full student survey can be found in Appendix D.

Figure 2. Sample Student Survey Questions

1.	My teacher cares about me.	1	2	3	4	5
3.	When I feel upset I seek comfort from my teacher.	1	2	3	4	5
8.	My teacher easily becomes angry with me.	1	2	3	4	5
10.	My teacher stays angry at me even after he/she disciplines me.	1	2	3	4	5
15.	My teacher openly shares his/her feelings and experiences with me.	1	2	3	4	5

To ensure students were not copying or being influenced by their peers when answering the questions, they were spaced apart and utilized cardboard tabletop blockers to keep their answers confidential. The surveys were administered to the entire class at the same time and

were monitored so that both positive and negative relationship factors were read aloud to control for reading differences between the students.

The STAR Reading student assessment was utilized as a pre- and- post-test to measure student achievement growth. STAR Reading provides nationally norm-referenced reading scores and criterion-referenced scores. It is an adaptive test so there would not be a ceiling. A student could reach above a third-grade reading level. To measure growth, the student survey participant responses were then correlated to their student test score growth data from STAR. The STRS student and teacher surveys were administered once near the end of the first semester to measure student-teacher relationships.

Pilot Study Results

The student survey was field tested with a group of 20 third-grade students in a school different than the classrooms that participated in the case study. The school student body demographic at the time of the pilot was 48% African American, 24% white, and 18% Hispanic. Sixty-three percent of the student body received Free or Reduced lunch and breakfast. The pilot classroom student makeup reflected the school demographic.

The pilot student survey was created using the Student-Teacher Relationship Scale (STRS) Short Form as a guide (Pianta, 2004). The STRS Short Form reduces the number of items from 28 to 15 for ease of use. However, during the scoring of the Short Form, it was discovered that the Short Form did not specifically match the STRS scoring rubric in the STRS manual. Therefore, the 28-item STRS Survey was the preferred survey instrument during the actual study. The questions were divided into the categories of closeness, conflict, and dependency and were tested for reliability (Table 2). Cronbach's alpha is the most common

measure of internal consistency. It is most commonly used with multiple Likert questions in a survey/questionnaire that form a scale and is used to determine if the scale is reliable.

TABLE 2

Reliability Results for the Constructs of Conflict, Closeness, and Dependency

Variables	N	Percent Total Questions	Cronbach Alpha	Mean	Standard Deviation
Students					
Conflict	12	43	.801	1.899	.098
Closeness	11	39	.524	1.514	.297
Dependency	5	18	.365	2.282	.097
Total	28	100	.563	1.898	.164
Teachers					
Conflict	12	43	.950	1.435	.080
Closeness	11	39	.901	.960	.103
Dependency	5	18	.759	1.444	.018
Total	28	100	.870	1.279	.067

The first question category was closeness, which contained seven questions. The Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items

are as a group. A measure is said to have a high reliability if it produces similar results under consistent conditions. Higher values of alpha are desirable (Santos, 1999). The Cronbach Alpha of reliability for the questions measuring closeness on the Student Pilot Study survey was .727.

The second question category was conflict, which contained eight questions. The Cronbach Alpha of reliability for the questions in this section measuring conflict on the Student Pilot Study survey was .718.

The third question category was dependency. There were five questions specific to the construct of dependency, representing 18% of the total set of questions. The Cronbach Alpha for the questions measuring dependency was .365 for students and .759 for teachers. It should be noted that relatively lower internal consistency reliability was found for the dependency subscale in the sample, as well as across gender and ethnic groups. This is partly due to the fact that there were only five items that comprised the dependency subscale. This result is consistent with Pianta's (2004) results, and it should be noted here that achieving strong Alpha was not the purpose of the study. Therefore, caution was taken with studying the subscale not to interpret dependency scores in isolation from other STRS scores (Pianta, 2004).

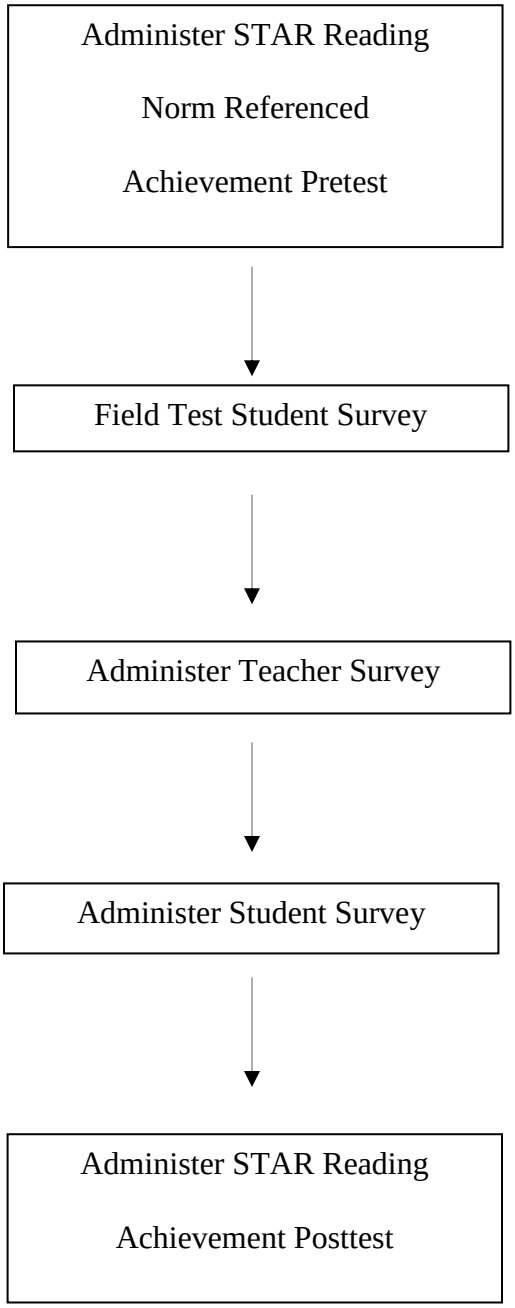
Achievement and Growth Data

The school district in which the study took place utilized a commercial computer-based assessment called STAR Assessments. In this study, STAR reading assessments were utilized to measure student academic growth. The school system gives the STAR Assessments three times per year (fall, winter, and spring). For the purpose of this study, student academic growth was measured between the fall and winter assessment administrations.

Data Collection

Quantitative data were collected in two ways. First, teachers and students completed the Student-Teacher Relationship Scale Survey, a 28-item self-report instrument that uses a 5-point Likert-type rating scale to assess a teacher's perception of his or her relationship with a student, a student's interactive behavior with the teacher, and a teacher's beliefs about the student's feelings toward the teacher. The teacher rated the extent to which a particular item applied to his or her relationship with a particular student. The STRS was scored by summing groups of items corresponding to three factor-based subscales that captured three dimensions of student-teacher relationships: conflict, closeness, and dependency. By using raw scores from these three subscales, a total scale score was obtained to assess the overall quality of the relationship.

Figure 3. Quantitative Study Data Collection Flow Chart



Student identities were kept confidential and were stored in an electronic database. Parental consent to participate was obtained for all student participants in the study, and all participants were given the opportunity to withdrawal at any time. All students involved in the

study completed a student survey that was designed to assess their perception of how their teacher cares for them.

This research, by focusing on the classroom processes over which schools have control, can inform the construction of school environments where students can be successful. This research can contribute to the existing body of research on student-teacher relationships and the impact these have on student achievement.

The use of quantitative methods extracts valid representative data from areas of student perceptions of student-teacher relationships and achievement data. Collecting and analyzing the data in a decodable fashion yielded valuable knowledge about student and teacher opinions, attitudes, and practices.

Reading Growth Measurement

The STAR Reading assessments have a database that utilizes more than 45 million STAR tests. From this data base, growth norms are calculated by approximating how much growth is typical for students of different achievement levels in different grades from one time period to another. In addition to screening students to forecast proficiency on end-of-year summative tests and progress monitoring their growth throughout the year, STAR Reading assessments capture a picture of each student's overall growth from the beginning of the school year to the end, or in semester increments. STAR Reading assessments generate a Scaled Score (SS), which was used for comparing student performance between the fall and winter assessment administrations. Any increase indicated that a student had experienced growth. STAR Reading Scaled Scores range from 0–1400.

Reading Assessment Instrument Reliability and Validity

The reliability of STAR Reading Assessments was estimated using two methods (Weiss, 2004), which included internal consistency (generic reliability coefficients) and test-retest correlation coefficients in a random national sample of more than 1.2 million STAR Reading tests administered between September 2012 and June 2013. The retest correlation coefficients were based on samples of 5,000 students per grade from the same dataset. Results are displayed in Appendix E. The internal consistency reliability was 0.97; it ranged from 0.93 to 0.95 within grades. Retest reliability estimates were 0.90 for all grades combined and ranged from 0.54 to 0.85 within grades (Renaissance, 2013).

To validate STAR Reading as a measure of both reading comprehension and a broad range of other reading skills, a wide range of correlations between scores on STAR Reading and scores on other recognized, established measures of different aspects of reading achievement, such as survey achievement tests, diagnostic reading measures, and state accountability tests, were correlated. Appendix F summarizes the results of more than 400 concurrent and predictive validity studies conducted for STAR Reading, involving a total of more than 1 million students. The average correlations observed in these studies range from 0.60 to 0.87; correlations in that range are considered strong.

Data Analysis

At the completion of the winter (post) 2016 administration of STAR Reading Assessments, student results from the fall (pre) STAR Reading assessments were compared to the winter STRS (Student-Teacher Relationship Scale) survey results for the purpose of getting a growth score correlation. This achievement growth score was correlated to winter survey results for the purpose of comparing academic achievement with evidence of the teacher and student STRS Survey scores.

Quantitative data were collected from the Student-Teacher Relationship (STRS) Survey. SPSS statistical software was used for data analysis. The study of statistics is often described by the two broad categories of descriptive and inferential statistics. The quantitative data analysis for this study included both descriptive and inferential statistics. Descriptive statistics are used to bring together and summarize data so that the data are more easily comprehended (Coladarci, 2014). Inferential statistics consist of procedures for making generalizations about a population by studying a sample from the population (Hinkle, Jurs, & Wiersma, 2003). The quantitative data from the STRS and student achievement data was transcribed, reviewed for concepts, and then coded. The codes used were related to the survey questions from the STRS.

This study, an exploratory work in a suburban-urban school district in Indiana, also used descriptive statistics to review the Student-Teacher Relationship Survey information that was collected during this study.

Employing quantitative methods, four different types of data sets were gathered. The first two parts of the data set were the quantitative student and teacher survey results; parts three and four included the quantitative results from the pre- and post-test student reading scores measured by the STAR Reading standardized achievement assessment. This collection allowed for comparison of the responses from the surveys with the themes and patterns from student achievement testing results. An analysis of variance (ANOVA) was utilized because these types of statistical tests demonstrate if there are significant differences and variations among group means given a selected probability level (Gay et al., 2006). Lastly, given the sample size of 181 plus participants, a regression analysis to estimate the relationships among variables was also completed.

Validating the Findings

Using data collected from student reading achievement data, Student-Teacher Relationship Scales (STRS) Survey, and classroom observation provided an opportunity to conduct a triangulation of data across student engagement themes (McMillan & Schumacher, 2006). In triangulation, researchers make use of the different sources, methods, investigators, and theories to provide corrobrating evidence (Creswell, 2007). Using these different content areas provides different insights about the topics and can help broaden the understanding of the method and the phenomenon of interests. This study included a student and teacher survey. The survey was adapted from Pianta's Student-Teacher Relationship Scale (STRS) Survey. Including students in the survey process allowed for a broader understanding of the phenomenon of the student-teacher relationship and its relationship with student academic achievement. Knowing what to pay attention to in terms of students' nonacademic interactional needs, such as relationship building, is a key ingredient in schools' efforts to meet the provisions of accountability legislation (Kohn, 2004). Discovering what teacher instructional and behavioral characteristics lead to significant relationships between students and their teachers is an integral component in establishing caring and supportive classroom environments that can promote higher student achievement and be more resistant to the pressures of high stakes achievement testing.

Limitations

One limitation in this study was that one proctor read the survey questions aloud and students completed their own survey. As such, it was difficult to consistently control for student inaccuracies and misunderstandings when answering the survey questions. Students were told to do their personal best to answer the survey questions as honestly as they could. An additional

limitation was the actual perceptions of the individual teachers. Perceptions are important, but they do not necessarily represent the reality or the truth in a situation or context. It is possible because this was a one-time measure that a student or teacher could have had a positive or negative interaction with his/her teacher or student the morning before completing the survey. As such, the student or teacher may score the relational survey questions higher or lower based upon the immediate interaction before the survey was completed and thus skew the survey data.

A further limitation would be the STAR Reading achievement assessment is a standardized reading test given to students three times per year. Student results are less likely to be influenced by the relational constructs of closeness and dependency. Nevertheless, it is a standardized test given on a single day and could be prone to the effects of a bad relational experience prior to the exam.

Although I do not conduct any direct teacher evaluation in my district, at the time of data collection, I was the Executive Director of Human Resources. It is possible that teachers and students may have acted differently than they normally do or said what they think I wanted to hear instead of answering as honestly as possible. Also, because the research was exploratory, with a small sample from 11 schools in the same district, the results may offer limited generalizability to other populations.

Lastly, the teacher selection process was two-fold, based upon principal recommendation and a teacher performance rating level of Highly Effective achieved on the Indiana RISE Teacher Evaluation Rubric. All teachers in the study were working within the same school district, so the findings of this study are generalizable to the same conditions. It is possible there would have been more variation with a random sample of teachers that presided in different school districts. The students who participated in the study with parent permission were from

four of the 11 elementary schools in the district. To be included in the sample, students were required to have attended the school for the entire school year and must have completed both the STAR Reading Pre- and Post-assessments used in the study.

Summary

This chapter was written to give a detailed explanation of how the research for this study was designed, as well as how the data were managed and analyzed. Chapter Four of this research project gives the detailed results of this quantitative study.

CHAPTER FOUR: RESULTS

The purpose of this chapter is to describe the results of the study. It is organized into three sections, which include a description of the data sources, the quantitative results, and a summary. This study was designed to explore any statistical differences in (a) how teachers perceive their relationship with students, (b) how students perceive their relationship with their teacher, and (c) how students' and teachers' perceptions of relationships influence student achievement scores, as measured by pre- to post-test scores from the STAR Reading standardized achievement assessment. As described subsequently, the data did not show a significant relationship between the perception of a relationship and achievement scores. Nevertheless, there are noteworthy findings as a result of this study.

Purpose of the Study

The purpose of this study was to learn if there was a correlation between student-teacher relationships and student achievement. The study analyzed how teachers rated themselves on the Student-Teacher Relationship Scale (STRS) Survey, which measures the three different relational constructs of Closeness, Conflict and Dependency, of a teacher's perception of his or her relationship with a student (Pianta & Stuhlman, 2004). The teacher ratings were then correlated with their student's growth in standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment. Next, the study compared how teachers rated themselves with the ratings of their students on the Student-Teacher Relationship (STRS) Survey. The study also aimed to contribute to the field of education by developing recommendations for teacher professional development in the area of student-teacher relationships. In summary, the primary purpose of the study was to examine the association between student-teacher relationships and student achievement.

Research Questions

The research questions that guided this study were as follows:

3. What is the correlation between teacher perceptions of student-teacher relationships, as measured by the Student-Teacher Relationship Scale (STRS) Survey, and the growth in student standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment?
4. What statistical differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with their teachers on the same student-teacher relationship survey, as measured by the Student-Teacher Relationship Survey?

Description of Data Sources

Chapter Three provided a summary of the data sources and types as they related to the research questions. The quantitative methods included descriptive and correlation techniques to describe students' relationships with their classroom teachers. This chapter presents an analysis of the Student-Teacher Relationship (STRS) Survey findings as they pertain to the research emphasis.

This study focused on third- grade students and teachers in a suburban-urban fringe area with a student population of approximately 16,000 students. Out of the total potential sample of 197 students, where parental permission had been obtained, 181 participated in the study resulting in a 92% response rate. The high response rate may be attributed to the teacher selection and indoctrination process. The teachers who participated in the study were rated as Highly Effective for the past three years and were recommended by their principal to participate in the study. Once selected, and prior to sending home student participation consent forms, I met

with the teachers in small groups to review the purpose of the study, the student and teacher survey questions, survey administration process, and the level of confidentiality that would be in place to protect both the teacher and student survey results. Subsequently, teachers were able to talk in detail with parents about their child's participation in the study. Additionally, there were three bilingual classrooms in the study. Each of these classrooms had a native Spanish speaking teacher. The ability of the teacher to explain the student survey to parents in their native language may have also positively impacted the response rate. Lastly, my long standing employment in the district has allowed me to build strong relationships with the teachers who participated in the study. It is possible teachers relayed their trust in me and communicated as much to parents.

TABLE 3

Study Participants

Variable	N	Percent of Sample
Total Students	181	
Student Gender		
Male	90	49
Female	91	51
Student Race		
Black	75	41
White	32	18
Hispanic	54	30
Multiracial	16	9
Asian	4	2
Lunch Status	121	67
Free	16	9
Reduced	44	24
Paid		
Teacher Gender		
Male	2	19
Female	9	81
Teacher Race		
Black	4	36
White	5	45
Hispanic	2	19

Table 3 shows that the population was comprised of 91 female and 90 male students. The student sample was 41% Black, 18% White, 30% Hispanic, 9% Multiracial, and 2% Asian; from this population, 76% of the students received free or reduced lunch. The average age for the students in the study was nine years and four months. The teacher sample was predominately

female (81%). The teacher demographics were 36% Black, 45% White, and 19% Hispanic. The student sample for the study was demographically consistent with other schools found in similar suburban-urban fringe areas in the Midwest; however, the teacher sample was more diverse than what is common for the average American public school (Kober, Jennings & Rentner, 2006).

Student-Teacher Relationship Survey

Two instruments were used in this study to measure relationships. First, teachers were given the Student-Teacher Relationship Scale (STRS) Survey (Pianta, 2004); and second, the STRS survey was adapted for students. Each teacher participating in the study completed the STRS for each student in his or her classroom. Completed surveys were collected and scored in accordance with the STRS Survey scoring procedure as defined in the STRS Survey Scoring Manual (Pianta, 2001).

The survey questions were tested for reliability utilizing the Cronbach Alpha, the most common measure of internal consistency of how closely related a set of items are as a group. It is most commonly used with multiple Likert questions in a survey/questionnaire that form a scale and to determine if the scale is reliable. A measure is said to have a high reliability if it produces similar results under consistent conditions. Cronbach Alpha is on a scale of 0-1 and higher values of Alpha are desirable (Santo, 1999; Pianta, 2004).

Table 4 reports the results for Cronbach Alpha testing for both students and teachers. For students, the first construct tested was conflict. There were 12 questions specific to the construct of conflict representing 43% of the total set of questions. The Cronbach Alpha of reliability for the questions measuring conflict was .801 for students and .950 for teachers. There were 11 questions specific to the construct of closeness representing 39% of the total set of questions. The Cronbach Alpha for the questions measuring closeness was .524 for students and .901 for

teachers. The third construct tested was dependency. There were five questions specific to the construct of dependency representing 18% of the total set of questions. The Cronbach Alpha for the questions measuring dependency was .365 for students and .759 for teachers. It should be noted that relatively lower internal consistency reliability was found for the dependency subscale in the sample, as well as across gender and ethnic groups. This is partly due to the fact that there were only five items that comprised the dependency subscale. This result is consistent with Pianta's (2004) results, and it should be noted here that achieving strong Alpha was not the purpose of the study. Therefore, caution was taken when studying this subscale not to interpret dependency scores in isolation from other STRS scores (Pianta, 2004).

TABLE 4

Reliability Results for the Constructs of Conflict, Closeness, and Dependency

Variable	N	Percent Total Questions	Cronbach Alpha	Mean	Standard Deviation
Students					
Conflict	12	43	.801	1.899	.098
Closeness	11	39	.524	1.514	.297
Dependency	5	18	.365	2.282	.097
Total	28	100	.563	1.898	.164
Teachers					
Conflict	12	43	.950	1.435	.080
Closeness	11	39	.901	.960	.103
Dependency	5	18	.759	1.444	.018
Total	28	100	.870	1.279	.067

Overall, the scales were more reliable for teachers than for students. This result was to be expected given what is known about the difference between adults and children when taking surveys. Below the age of seven, children do not have sufficient cognitive skills to be effectively and systematically questioned (De Leeuw, 2011). The age of seven is a major developmental point in the cognitive and social maturation of children; and with care, children can be interviewed with structured questionnaires or can complete self-reports from seven years

onwards. The age of seven is mainly based on studies in Western-Europe and the United States, and even in these privileged circumstances not all children develop equally fast (De Leeuw, 2011). Children older than seven years old may be surveyed directly; and the older the child, the more reliable the answer will be. Below the age of seven, direct questionnaire research of children is not advisable; between 7-10 years of age, careful pretesting should always be done to decide if direct questioning is feasible. In total, care should be given to the construction and the implementation of questionnaires for children.

Correlation Statistics for Teacher Perceptions of Student-Teacher Relationships and Student Growth on STAR Reading Pre- to Post- Assessment Scores

Statistical models were conducted to discover the correlation between a perceived student-teacher relationship and student reading achievement scores. Next was an examination of descriptive information for student growth by lunch status, gender, age, and race as measured by the pre- to post- STAR Reading assessment (Table 5).

Specific to Research Question One. What is the correlation between teacher perceptions of student-teacher relationships, as measured by the Student-Teacher Relationship Scale (STRS) Survey, and the growth in student standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment?

The information about student assessment scores came from the STAR pre- to –post standardized Reading Assessment (Table 5). As well, there were no significant relationships found between students' pre- to post-test scores on the STAR Reading Assessment and the variables of gender and lunch status.

TABLE 5

Student Pre- to Post-test STAR Reading Assessment Scores

	N	STAR BOY Mean	STAR BOY SD	STAR EOY Mean	STAR EOY SD	STAR Growth Mean	STAR Growth SD
Gender							
Male	95	257.25	140.61	375.62	169.40	118.37	95.27
Female	92	294.87	145.65	405.25	151.96	110.38	72.33
Total	187	275.76	143.97	390.20	161.32	114.37	83.08
Race							
Black	78	257.37	124.36	356.18**	123.22**	98.81	70.79
White	33	363.76	167.51	484.06	153.58	120.30	104.68
Hispanic	56	251.20	132.64	363.96**	152.13**	112.00	63.90
Multiracial	16	250.00	160.31	420.56	265.30	170.56	137.33
Asian	4	355.25	143.53	525.00	163.09	169.75	41.95
Total		275.76	143.97	390.20	161.31	134.28	83.73
Lunch Status							
Free	121	234.81	119.58	339.86	133.17	105.06	75.21
Reduced	16	318.00	92.57	437.24	98.77	119.24	75.45
Paid	44	373.56	170.21	512.24	182.16	138.69	106.81
Total	181	275.76	143.97	390.20	161.31	120.99	85.82

$p < .10$ * $p < .05$ ** $p < .01$

However, there is a relationship between the end of the year STAR Reading assessment and student race (Figure 4). White, Multiracial, and Asian students scored higher than their Black and Hispanic counterparts. This finding can be attributed to a lower starting point, but the greater standard deviation also shows more erratic growth among males.

Figure 4. Student Pre- to -Post STAR Reading Achievement Assessment Scores.

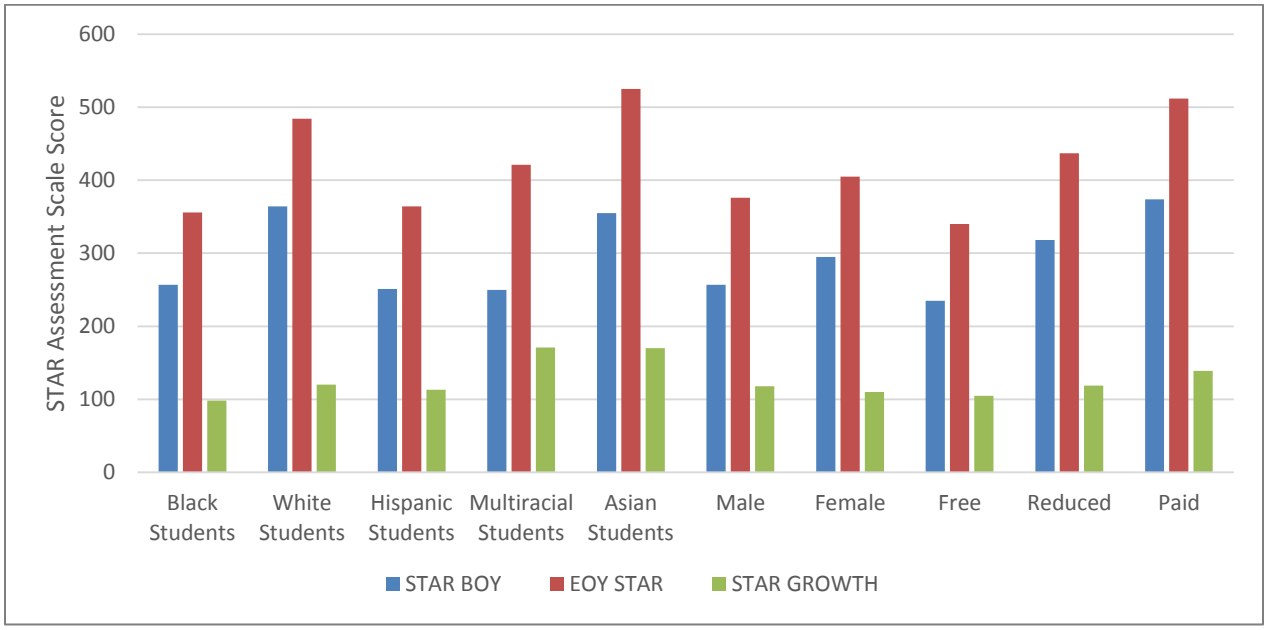


Table 6 contains the results of a correlation for the Achievement and Relational constructs of Closeness, Conflict, and Dependency. The strongest correlation was between the beginning of the year and the end of the year STAR Reading Assessment scores. This makes sense since it is the most linear and progression based of any of the measured points. The STAR reading assessment is highly structured and prescriptive yet remains consistent as it is measuring the same type of information. The format between the beginning of the year and the end of the year remains consistent; it is measuring the same type of information instead of how one influences the other. Therefore, it is logical that there would be a strong correlation. Secondly,

similar to the beginning and the end of the year reading scores, the STAR Growth is measures data of a similar nature. The growth score is based on previous years, so it is not surprising to have a strong correlation. The third correlation, unlike first two, focused on the correlation between more emotionally and intangible data. Concepts of closeness and dependency are abstract and more likely to fluctuate, which could skew the data. The fourth correlation, like the third of conflict and dependency, was fluid. Students, particularly younger ones, may struggle to articulate the words and feelings that are associated with each. This struggle may influence the strength of the correlation in a negative manner because the correlation for the relational is lower or less tightly aligned;, however, it is more easily influenced by outside factors such as a student having a bad morning or a teacher telling a student something they do not like before the student answers the survey questions.

The correlation findings were noteworthy as there are two different types of data represented: achievement and relational. The STAR Reading achievement assessment is a standardized reading test given to students three times per year. Student results are less likely to be influenced by the relational constructs of closeness and dependency. Nevertheless, it is a standardized test given on a single day and could be prone to the effects of a bad relational experience prior to the exam. However, the student-teacher relationship survey (STRS) is more abstract and dependent upon day-to-day relational interaction between the student and teacher, which could fluctuate between administrations and thus skew the STRS data.

TABLE 6

Correlation Table for Achievement and Relational constructs of Closeness, Conflict, & Dependency

		STAR BOY	STAR EOY	STAR Growth Expected 74 pts	Student STRS DEP	Student STRS CLO	Student STRS CON
STAR BOY	Pearson Correlation						
	Sig. (2-tailed)						
	N	187					
STAR EOY	Pearson Correlation	.852**					
	Sig. (2-tailed)	.000					
	N	187	187				
STAR Growth	Pearson Correlation	.077	.456**				
Expected 74 pts	Sig. (2-tailed)	.297	.000				
	N	187	187	187			
Student STAR	Pearson Correlation	.042	.058	.040			
Dependency	Sig. (2-tailed)	.576	.437	.597			
	N	181	181	181	181		
Student STAR	Pearson Correlation	-.081	-.079	-.014	.264**		
Closeness	Sig. (2-tailed)	.280	.288	.847	.000		
	N	181	181	181	181	181	
Student STAR	Pearson Correlation	.062	.123	.127	.256**	-.133	
Conflict	Sig. (2-tailed)	.406	.100	.087	.001	.073	
	N	181	181	181	181	181	181

** Correlation is significant at the 0.01 level (2-tailed).

Specific to research question two. What statistical differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with their teachers on the same student-teacher relationship survey, as measured by the Student-Teacher Relationship Survey?

High-quality student-teacher relationships are linked to a number of important academic and social outcomes (Stipek, 2006). School policies that support positive relationships between students and teachers can contribute pointedly to the social emotional health and well-being of students and in turn to their academic performance as well (Pianta, 1999). Therefore, a second goal of this research project was to establish if there was a correlation between how a teacher perceives his/her relationship with a child and how the child perceives that relationship with his/her teacher. If high quality student-teacher relationships increase student engagement and that leads to increased student achievement, then it will be important to measure that gain (Gargani, Hacifazliglu, & Stronge, 2011). To that end, a multiple regression analysis (Table 7) was conducted to examine the statistical differences in how teachers perceive their relationship with their students to how students perceive their relationship with their teachers. In each of the six regression models, the outcome was a teacher's or student's view of his or her relationship with a teacher or student on the relational constructs of dependency, conflict, and closeness.

TABLE 7

Statistical Outcome Differences in the Regression Models for the Relationship Constructs of Dependency, Conflict, and Closeness

Outcome	Dependency Teacher Perception	Dependency Student Perception	Closeness Teacher Perception	Closeness Student Perception	Conflict Teacher Perception	Conflict Student Perception
Student Race	.084	.049	-.126	.056	.150*	.122
Student Lunch Status Free, Reduced, Paid	-.054	.003	.015	-.050	.090	.095
Student Gender	-.131	.131	-.227**	-.237**	.215**	.070
R^2	2.4	2.0	6.7	6.1	9.0	3.8
Constant	13.29	58.16	43.44	40.92	17.88	22.12

- $p < .10$ * $p < .05$ ** $p < .01$

The six regression models resulted in four significant findings. The first two models were specific to the construct of dependency, or the degree to which a student or teacher perceives a particular teacher or student as dependent upon him or her. There were no significant differences for teacher or student perceptions of dependency based on race, lunch status, or gender.

The next two regression models were specific to the construct of closeness, or the degree to which a teacher or student experiences affection, warmth, and open communication with a particular student or teacher. For the construct of closeness, when controlling for race, lunch status, and gender, teachers reported they perceived more closeness with female students as compared to male students. The model accounted for 6.7% of the variance between the construct of teacher closeness and the variables of race, lunch status, and gender. Teachers perceived that their closeness was .23 SD ($p = .002$) lower for male students as compared to female students.

The student model for closeness produced similar results as the teachers. The model explained 6.1% of the variance for the construct of student closeness with the variables of race, lunch status, and gender. The students perceived the construct of closeness at -.24 SD ($p = .011$) lower for male students than female students.

The final two models were specific to the construct of conflict, or the degree to which a teacher or student perceives his or her relationship with a particular student or teacher as negative. For the construct of conflict, when controlling for all variables, race and gender were found to be significant variables. The model is accounts for 9% of the variance for the construct of teacher conflict and the variables of race, lunch status, and gender. Teachers perceived that their conflict is .15 SD ($p = .049$) higher with Black and Hispanic students as compared to White, Multiracial, and Asian students. Teachers also perceived conflict was .22 SD ($p = .003$) higher with male students as compared to female students; subsequently the variable of race is significant at .15 SD ($p = .049$). Teachers also reported less conflict with female than male students. This information demonstrates that the variable of gender is significant at .22 SD ($p = .003$). Lastly, the student model for the construct of conflict showed no difference when controlling for the variables of race, lunch status, and gender (Table 7).

Summary

In this chapter, there were three key findings. First, student-teacher relationships did not impact student achievement scores pre- to post- reading, as measured by the STAR Reading standardized achievement assessment. The data presented in this chapter did not reveal a correlation between teacher perception of student-teacher relationships and the growth in standardized achievement scores, pre- to post-test STAR reading assessment scores (Table 7).

The second key finding of the study was two-fold and regarded differences in how teachers perceived their relationship with students to how students perceived their relationship with the teachers. The data presented in this chapter showed there was a statistically significant relationship found between the construct of closeness and the variable of gender. Female students perceived that they experience greater affection, warmth, and open communication with their teachers than did male students. Furthermore, teachers reported that they shared greater closeness with female students than they did with male students. Additionally, there also was a significant relationship found between the variable of race and the construct of conflict. Teachers statistically perceived a higher degree of conflict with Black and Hispanic students than with White, Multiracial, and Asian students.

A final finding of the study was teachers statistically perceived a higher degree of conflict with male, Black, and Hispanic students than with male, White, Multiracial, and Asian students. This is an interesting finding given that Black and Hispanic students scored lower and showed less growth on the pre- to post-test STAR Reading Assessment than did White, Multiracial, and Asian students (Figure 4). This final finding of the study will be further discussed and examined in greater detail in Chapter 5.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents a summary of the study and important conclusions drawn from the data presented in Chapter 4. It provides a discussion of the overview of the problem, methods, major findings, summary of the literature review, conclusions, implications for action, and recommendations for further research.

Overview of the Problem

School districts continue to seek ways to improve teaching and learning that will lead to improved student achievement. District leaders want to ensure students are learning in ways that will support students throughout their K-12 educations, post-secondary educations, and into the workplace. Beginning in 2002 with the requirements of NCLB and now more recently in 2015 under ESSA, school districts are required to report annually multiple measures of student achievement including academic performance, academic growth in mathematics and language arts, graduation rate, development of English Learner proficiency; and under ESSA specifically, they must report at least one alternative indicator of school quality or student success (Hough, Penner, & Witte, 2016). This last indicator can include measurements of student engagement, educator engagement, or school climate. This study has implications for alternative indicators of school quality under ESSA.

Purpose Statement

The purpose of this study was to compare how a group of 11 principals recommended teachers with an evaluative rating of Highly Effective from four schools within the same school district rated themselves on a Student-Teacher Relationship Survey. The survey measures three different aspects of a teacher's perception of his or her relationship with a student with their students' growth in standardized achievement. A second purpose of this study was to compare

how teachers rated themselves with the ratings of their students on a Student-Teacher Relationship Survey relative to the relational constructs of conflict, closeness, and dependency to identify relationships among gender, socioeconomic status, ethnicity, and achievement.

Research Questions

The research questions that guided this study were as follows:

1. What is the correlation between teacher perceptions of student-teacher relationships, as measured by the Student-Teacher Relationship Scale (STRS) Survey, and the growth in student standardized achievement scores measured by pre- and post-test scores on the STAR Reading assessment?
2. What statistical differences exist in how teachers perceive their relationships with students to how their students perceive their relationships with their teachers on the same student-teacher relationship survey, as measured by the Student-Teacher Relationship Survey?

The dependent variables in this study were the growth in student achievement as measured by the differences in pre- and post-test reading scores on the STAR Reading standardized assessment and the students' perceptions of their relationship with the teacher. The independent variables in this study were the age of students, gender, race, lunch status, and previous levels of achievement.

Methods

To respond to the research questions and identify possible relationships among students' and teachers' perceptions of a shared relationship, a quantitative design was utilized to summarize the data and reach generalizations based on statistical models. The phenomenon in the study was the correlation between teacher perceptions of student-teacher relationships,

student perceptions of student-teacher relationships, and standardized reading achievement scores. The data collected and analyzed encompassed multiple data sources including student and teacher surveys and student achievement data. A Student-Teacher Relationship Survey was administered coinciding with the post administration of a standardized Reading Assessment designed to show student reading growth throughout the year. The survey gauged the teacher's perception of his or her relationship with a student, a student's interactive behavior with the teacher, and a teacher's beliefs about the student's feelings towards the teacher (Hamre & Pianta, 2001). The student survey was created using the STRS teacher survey as a guide. Each question on the student survey was a direct reflection of the corresponding numbered teacher question except that the student question was written in a manner to be more comprehensible by students. The student survey similarly gauged the student's perception of his or her relationship with a teacher, a teacher's interactive behavior with the student, and a student's beliefs about the teacher's feelings toward the student.

Major Findings

For Research Question One, statistical models were conducted to discover if there was a correlation between a perceived student-teacher relationship and student reading achievement scores and to what degree that correlation impacted student achievement (Table 7). Ultimately, the data did not reveal a significant correlation between the perception of a student-teacher relationship and achievement scores for the variables of age, gender, or lunch status. It is possible that having third-grade students analyze their relationships with their teachers is not reliable. According to De Leeuw (2011), when surveying children, language ability is an important issue because reading and language skills, including comprehension skills, are still developing in middle childhood ages 7 through 12. Extra attention should be paid to complexity

of wording, negations, and logical operations such as *and, or* as children can be very literal; depersonalized or indirect questions should be checked carefully. In general, publications about interviewing children emphasize the importance of a well-designed protocol for open interview situations and the extreme importance of explaining clearly what is expected of the child (De Leeuw, 2011). Although the survey was created in consideration of these ideas, there is still a possibility of these factors being influential on the data.

Another consideration would be the difference in sample size between this study of 181 third-grade participants and that of Pianta and Hamre (2001), where the sample size was considerably larger with over 1500 students from pre-school through third grade and 275 teachers distributed across seven states representing all regions of the United States. It would also be important to note that Pianta and Hamre's (2001) study was based upon the teacher's perception of a relationship with the student only. There was no consideration given to the student's perception of a relationship with the teacher, which is unlike this study where both the student and teacher completed a Student-Teacher Relationship Survey.

Second, for Research Question two, two statistical models were conducted to discover if there were differences in how teachers perceived their relationship with students to how their students perceived their relationship with the teachers on the same student-teacher relationship survey. Interestingly, there was a relationship between the end of the year STAR Reading assessment and student race (Figure 4). White, Multiracial, and Asian students showed more growth and scored higher than Black and Hispanic students.

It was also discovered that teachers perceive they are closer to their female students than to their male students; and conversely, female students perceive they share more closeness with their teacher than do male students. Additionally, there was a statistically significant difference

in how teachers perceived their relationship with students of different racial groups. Teachers perceived higher conflict with Black and Hispanic students than with White, Multiracial, and Asian students. Despite these findings, students did not perceive conflict with their teachers.

These findings are consistent with research conducted by Hughes and Kwok (2007) in which they found that multiple factors contributed to the quality of the student-teacher relationships. Students who exhibited under-controlled or aggressive behaviors establish relationships with teachers characterized by lower levels of support and acceptance and higher levels of conflict. Compared with girls, boys' relationships with teachers were characterized by less closeness and more conflict, perhaps because boys are less conforming and self-regulated than girls (Hughes & Kwok, 2007). Second, minority, especially African American children, and children of low socioeconomic status (SES) are less likely than White or higher SES children to enjoy supportive relationships with teachers (Hughes & Kwok, 2007). This is a key finding given that in this study Black and Hispanic students showed less growth and scored lower on the post-test STAR Reading Assessment (Figure 4) than did their White, Multiracial, and Asian counterparts.

Findings Related to the Literature Review

In the literature review for this study, school climate was stated to be the characteristics, beliefs, and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice that build student-teacher relationships and promote greater student achievement. According to Hamre and Pianta (2001), children who were able to successfully navigate early school-based social environments tended to get off to a better start and continued to profit throughout their educational career from their social knowledge. Moreover, markers of classroom social adjustment, including emotional regulation, school liking, peer competence,

student engagement, and self-control, are linked to children's success in school (Pianta & Stuhlman, 2004). It is evident that, at least in the primary grades, classroom social adjustment is influenced by adult-child relationships (Hamre & Pianta, 2001). Therefore, it was predicted that qualities of the student-teacher relationship as measured by low conflict and dependency and high levels of closeness could forecast later student successes.

The quality of children's relationships with their teachers in the early grades has important implications for children's current and future academic and behavior success (Hughes & Kwok, 2007). Student engagement and academic achievement often are viewed as individual student attributes or traits but not as outcomes of how teachers structure their teaching. Seeking to move beyond teacher demographics and credentials as predictors of student engagement and performance, researchers are focusing their efforts on examining teacher-student interactions or classroom social processes that promote student outcomes (Brackett, Reyes, Rivers, Salovey, & White, 2012). Considerable research suggests that students work harder, feel more engaged and connected to school, are more intrinsically motivated, and achieve academically at higher levels when they believe that their teachers understand and care about them (Marshik, Ashton, & Algina, 2017). It is important to be mindful of this when examining student achievement and success in specific classrooms.

Caring teachers prompt positive relationships in young children by listening to their concerns and responding to transgressions gently and with explanations rather than with punishment (Pianta, Stuhlman, & Mare, 2004). Caring teachers have a passion for who and what they teach and press students to learn by encouraging them, giving constructive feedback, and refusing to accept halfhearted efforts. Child competence is often embedded in and a property of relationships with adults, and adult relationships are critical regulators of development by

forming and shaping it (Pianta, 2004). Teacher characteristics, such as beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice, build student-teacher relationships and promote greater student achievement (Hamre & Pianta, 2001). Once again, aspects of teaching that are unrelated to curriculum and instruction carry large influence on student achievement.

It was further stated in Chapter Two that a teacher's classroom behavior is constantly under scrutiny by students, and as a result, students learn a great deal from a teacher's noverbal immediacy behavior (Teven, 2001). These behaviors typically include a teacher's facial expression, eye contact, gestures, relaxed body positions, smiling, verbal expressiveness, proximity, posture, and other body movements that provide the student with valuable information about the teacher's emotional state and attitude toward the students (Teven & McCroskey, 1997). A good predictor then of how well students do in a teacher's class is students' perceptions of and affection for their teacher.

Although statistical models conducted in this study did not reveal a significant correlation between the perception of a student-teacher relationship and reading achievement scores for the variables of age, gender, or lunch status it is possible that having third-grade students analyze their relationships with their teachers is not reliable. Nevertheless, there is considerable research in the Literature Review of this study to support that student-teacher relationships impact student classroom performance. According to Teven (2001), in order to maximize learning, it is vital for teachers to develop a strong relationship with their students, because the rapport established between teachers and students, in part, sets the conditions for the interest and performance level of the students. Teaching is a personal relationship involving the interaction of teacher and student personalities. A vital requisite to effective teaching is establishing a climate of warmth,

understanding, and caring within the classroom (Teven, 2001). Not only do caring teachers tend to produce greater achievement gains on the part of their students, but they also tend to produce better affective responses from their students and have more positive classroom atmospheres (Hughes & Kwok, 2007).

Accumulating evidence suggests that when teachers create a sense of community, show empathy, respond to students' needs, and foster positive relationships, academic achievement ensues, perhaps because students are more engaged and enthusiastic about learning (Reyes et al., 2012). It would be prudent then to build on this study and pay particular attention to the presence or lack of these teacher characteristics.

Conclusions

In summary, this study did not reveal a significant correlation between the perception of a student-teacher relationship and student achievement scores for the variables of age, gender, or lunch status. As was noted earlier, it is possible that the size and difference in scope between this study and that of Pianta and Hamre (2001) could be a contributing factor for why there was a weaker correlation between student–teacher relationships and achievement. Further, the sample size limits generalizability to other populations. Teachers included in the study were working within the same school district, so the findings of this study are generalizable only within the same conditions.

The study revealed that teachers perceive higher conflict with male Black and Hispanic students. This higher level of conflict would be important to study in schools with large Black and Hispanic student populations. It is possible that instructional conflict may occur between teachers and minority students. This could lead to the perception of a weaker relationship causing a barrier to future student success.

The question then becomes how might a weaker student-teacher relationship affect Black and Hispanic students over the course of a K-12 educational experience? According to Pianta (2004), cultural norms often differ between White, Black, and Hispanic students and their teachers, which can impact a student's success, as relationships with teachers influence many school-related outcomes, such as competencies with peers in the classroom and trajectories toward academic success or failure. Some student-teacher relationships can be characterized as close and affectionate, others as distant and formal, and still others as conflictual (Hamre & Pianta, 2001). The findings of this study reflected this research as female students perceived closer relationships with their teachers than male students, and teachers perceived more conflict with Black and Hispanic students than with White, Multiracial, or Asian students.

The second finding in this study is compelling and worth future research. If a teacher perceives higher conflict with Black and Hispanic students, and as a result, the students perceive the teacher as uncaring, this may relate to student disengagement in the classroom.

School districts wanting to address possible instructional conflict and to improve student-teacher relationships could implement professional development to address relational conflict between minority students and their teachers. One possibility would be to implement culturally responsive teaching practices. Culturally responsive teaching practices have been defined as those teaching practices that are grounded in an understating of the role of culture in the teaching and learning process (Adams, Bondy, & Kuhel, 2005). Understanding the role of culture in the teaching and learning processes is a foundation of culturally responsive teaching practices and promotes academic achievement by encouraging the development of personal relationships between teachers and their students.

Policy Implications

The job of a classroom teacher has become far more complex since the implementation of NCLB in 2002 and later ESSA in 2015, both of which established high expectations for educational programing that was designed to help disadvantaged students and eliminate the academic achievement gap between White and minority students. For example, at a local level and in the urban-suburban fringe school district where this study was conducted, the school board policy expressly calls for the elimination of racial disparities in achievement while raising achievement levels for all students to ensure educational equity. In this time of school accountability where outcomes from high stakes standardized achievement testing result in rewards and punishments, schools need every advantage possible to increase student academic growth (O'Neil, 1997). This reality has driven a renewed interest in the social and emotional aspects of learning, where schools focus on the well-being of students and their ability to communicate, problem solve, and get along with classroom peers and the teacher.

Perhaps a key element missing from federal Follow Through programming such as Head Start, core curriculum standards, achievement testing, and accountability is the very thing that drives the motivation behind learning in the first place, and that is human interaction, relying on verbal and non-verbal avenues of communication between the student and teacher (Osterman, 2004). Yet, schools are forced to produce high test scores or face penalty. This accountability structure is motivating academic activity and driving the way schools are organized to overemphasize the cognitive dimension of learning because it can be measured. The question then becomes is it worth the effort it takes to build student-teacher relationships in this era of accountability?

School policy can also influence the student-teacher relationship. There is rarely an occasion during which school staff discuss problems of children in schools when they do not discuss the matter of student-teacher ratios. Teacher-child ratios affect the stability of adult-child interactions by influencing the frequency or rate of interactions between a single adult figure and the child (Pianta, 2000). Another practice that can disrupt child-teacher relationships is the use of pull out models of service delivery, which entail ongoing student transitions in and out of the classroom. Classroom management models may negatively affect a student-teacher relationship when a teacher misuses a system in which rewards and punishments are included by taking away points or rewards that have already been earned by the student. Lastly, teacher contact time can affect student-teacher relationships. If one inquires with a teacher at the end of the school year about the connection between their teaching and their relationships with students, the answer often is, "I was just beginning to reach him or her."

Implications

Learning takes effort, and one of the best predictors of student effort and engagement in school is the relationships they share with their teachers (Osterman, 2004). As set forth first by NCLB and then later under ESSA, school districts continue to hone the education processes and look for changes to attain the level of student achievement necessary for all students to be successful.

Administrators use data available to them to engage in continuous improvement processes with teachers. This data usually comes in the form of student achievement, disciplinary, and/or attendance data. Other considerations would be staff experience level, teacher evaluation, education levels, compensation models, and/or state and local assessments.

However, such data can overlook the affective side of teaching and learning, especially from the student point of view.

Consider that in most cases affective information is gathered from staff input but not necessarily from student input (Matthews, 2000). According to Hughes (2007), recent research has strongly suggested that a reliance only on teacher reporting provides an incomplete picture of the teacher-student relationship. For example, different from Pianta and Hamre's (2001) study, which was based only upon the teacher perception of a student-teacher relationship, this study was based upon input from both the teacher and student perception of a student-teacher relationship. As such, a unique finding of this study was that teachers perceived higher conflict and less closeness with Black and Hispanic students, specifically males. However, students did not perceive conflict with their teachers. That difference may be because students appear to organize their perceptions of teacher support and conflict differently than do teachers. It may be difficult for teachers to provide support to children who require high levels of teacher correction. However, children's perceptions of relational support were less dependent on their perceptions of relational conflict (Hughes, 2007). Specifically, children who perceived high levels of conflict in their relationships with teachers may also perceive the teacher as emotionally supportive and as liking of the student; and therefore, the student perceives that the teacher cares for them even though the teacher indicated otherwise on the survey.

In this study, students did not perceive conflict with their teacher, but the teachers did perceive higher conflict with Black and Hispanic students. It would be wise then for the teachers to understand that the perception of higher conflict could impact the learning of their students, especially minority students. It is possible that the teachers in my study who reported higher conflict with Black and Hispanic students transmit that perception to their students through non-

verbal gestures. It would be important then for teachers to be aware of how their non-verbal communication might communicate higher conflict. Building teacher understanding of these types of exchanges would be important for teachers to counteract poor student-teacher relationships by going out of their way to compliment positive behaviors, show an interest in the students' lives outside of school, and listen to the students' perspectives on the problems they are having; they must do more than stand and deliver instruction. Thus, including students in the process can provide a unique understanding of how they interact with their teacher. With this knowledge schools could develop more informed social-emotional and affective professional development for teachers.

At a classroom and building level, this study would be important to helping schools establish a positive school and classroom climate through improved student-teacher relationships. It is vital for schools to have a better understanding of student-teacher relationships, specifically how students perceive the way their teacher cares for them and how the student cares for their teacher (Pianta, 2000). Administering the Student-Teacher Relationship Survey multiple times throughout the school year would provide schools valuable relational data that would assist in the development of teacher training in an effort to build a more caring school for all children.

At the district level, this study has education leadership implications for teacher recruiting and hiring. District leadership must lead the way by implementing specific hiring strategies that aim to attract and retain teachers with strong interpersonal and soft skills. Further, it would be important for district hiring practices to include a component that identifies teacher candidates who show strong interpersonal abilities, as well as discover a candidate's beliefs with respect to the social-emotional and affective side of teaching. Adding personality assessments,

questions, or surveys to the interview process that are specific to how a teacher candidate would develop and maintain a positive classroom environment would be a step in the right direction. These components would also provide data that would assist interview committees in selecting candidates who show strong interpersonal characteristics. Lastly, putting the right teachers in front of students is important given the elevated level of conflict teachers perceive with Black and Hispanic male students recruiting Black and Hispanic teachers, specifically males would be paramount and may help reduce relational conflict.

At the district and collegiate level, this research could assist education leadership through the development of social-emotional and affective instructional and culturally relevant pedagogy training leading to improved classroom climate and culture. Such training should be systematic and occur on a regular basis such as during a weekly Professional Learning Community meeting, grade level meetings, or teacher in-service training days. Also, this study showed that teachers favored female, White, Multiracial, and Asian students. Therefore, it would be vital to also develop pre-service and ongoing district level culturally responsive and equity professional development to address student-teacher relationships with all races. Research conducted by Hughes (2011) suggested that professional development efforts that improve student-teacher relationships must be sustained over time, embedded in teachers' classrooms, and provide mentors or coaches who provide context-embedded feedback and emotional support to teachers.

In order to sustain teacher efforts to build student-teacher relationships over time and document social-emotional growth teacher evaluation could provide a platform to collect observation and instructional progress data of teacher implementation of social-emotional and culturally relevant curriculum. Ongoing and constructive feedback could be communicated to teachers through the regular evaluation process. Feedback themes and data analysis from teacher

evaluation conferences could be used to develop ongoing social-emotional and student-teacher relationship professional development throughout the school year. Additionally, another mechanism that could be used to obtain school and district level culture and climate data would be to utilize the alternative indicator of school quality, student successes and/or teacher successes provided under ESSA. Employing building and district level climate and culture surveys to be administered in conjunction with state-mandated achievement testing would also provide additional data that would help educational leaders to identify which teacher characteristics build or encumber student-teacher relationships. From this data specific recommendations could be developed for teacher professional development.

Finally, Education Leadership at the collegiate, district, building and even classroom level should articulate a vision of excellence through improved student-teacher relationships. Utilizing data from the Student-Teacher Relationship Survey, in conjunction with other culture and climate surveys that could be administered to students, staff, administration and/or the community on a regular basis would give educational leaders valuable feedback and input for shaping a vision statement. Once done so, the vision should be echoed throughout the organization at every level and opportunity.

Recommendations for Future Study

There were multiple limitations identified in the study. The first limitation was the sample size. In order to yield a statistically meaningful result it would be recommended that the sample size be far larger than the 181 participants in this study. As noted prior in this study, Pianta and Hamre (2001) had a sample size of over 1500 students from pre-school through third grade and 275 teachers distributed across seven states representing all regions of the United States. Also, because the research was exploratory with a small sample from 11 schools in the

same district, the results cannot be generalized to other populations. There is also the possibility of teacher bias given I was also employed by the same school district throughout the course of the study. Teachers included in the study were recommended by the building principal and had been identified as highly effective teachers working within the same school district, so the findings of this study would be generalizable only within the same conditions. It is possible there would have been more variation with a random sample of teachers who taught in different school districts and were representative of not just highly effective teachers, but also included teachers rated as effective or needing improvement. In future study, it is recommended that research be conducted across multiple grade levels and school districts representing different race and socioeconomic status levels of students. It would be interesting to see how a group of students would continue to develop their perception of a relationship with a teacher or teachers at the Middle and/or High School level over time. Further research should implement a multi-year study of how the student's perception of a relationship with a teacher or teachers impacts their academic and social-emotional growth over multiple grades or even across the K-12 spectrum. However, if this study was replicated at the secondary level, considerations would need to be made for the significantly different learning environment found at that level.

Another consideration for future study would be the actual administration of the student-teacher relationship survey. In this study, one proctor read the survey questions aloud and students each completed their own survey. As such, it was difficult to consistently control for student inaccuracies or misunderstandings when answering the survey questions. In future study, survey administration should include at least two additional proctors to ensure students are following administration guidelines accurately. Proctors would also be able to assist students on a one on one basis thus avoiding any possible peer embarrassment when asking questions or

seeking guidance in answering survey questions. An additional limitation is the actual perceptions of the individual teachers given that there was only one collection of relational data.

Discussion

The ability to form relationships later in childhood and life can be studied using attachment theory. According to Pianta (2000), a major theme for the second six months of life and throughout childhood is the formation and maintenance of an effective attachment relationship. In almost every theoretical consideration of child development, an effective attachment develops as a consequence of early patterns of interaction. This attachment affords the child a sense of security in the context of a relationship and provides a basis for exploration of the objective and the interpersonal world (Pianta, 2000). As the child enters the early school years, teachers may assume a parent-surrogate role with the children they teach and may develop a relationship with the child that has considerable importance (Pianta, 2000). Like the parent-child relationship, the teacher-child relationship can be characterized as close and affectionate, or as distant and formal, and still others as conflictual. Nevertheless, these early relational interactions and experiences impact a child's ability to form positive student-teacher relationships.

At the school level, the teacher is the central component for student success. Unlike in the secondary setting, elementary students spend the majority of their day with one teacher who is responsible for the entirety of a student's learning. Without a strong connection between the student and teacher, learning could be negatively impacted. It is the values, commitments, and professional ethics that influence teacher characteristics toward students, families, colleagues, and communities, as well as an educator's own professional growth, which affect student learning, motivation, and development (Usher, 2003). Yet, schools are encouraged to produce

high test scores or face penalty (Hughes & Kwok, 2007). This accountability structure is motivating academic activity and driving the way schools are organized to overemphasize cognitive skills because they can be measured (Comer, 2005). High stakes mandated achievement testing that results in rewards or punishments to schools only further distances teachers from their students and makes it challenging to have meaningful social-emotional affective exchanges between teachers and students.

Additionally, theories of social development can be used to understand how social processes in classrooms, more specifically relationships between teachers and children, can be enhanced. Specifically, theories on the social impoverishment of high-risk children have been described and linked with practices designed to reduce risk by addressing relationships between teachers and children (Pianta, 2000). To be successful, one needs a threshold level of cognitive ability. However, equally important are the soft skills of creativity, personal discipline, and the ability to relate to other people. Together, these intelligences combine to become the effective intelligence. According to Comer (2005), a child's overall development, and not simply their cognitive or intellectual development, is what makes learning possible. The classroom environment is essential to student success in school. Thus, finding teachers who have the appropriate pedagogical instructional skills that enable them to build relationships with their students is all the more important.

Lastly, school level administrators will want to explore social-emotional curriculum and programing to develop a positive classroom culture, while ensuring that the same occurs at the building level. District level professional development leaders can benefit from this study by providing information and implementing training for teachers that highlight the importance of

students' perceptions of the relationship they share with their teacher and how that relationship motivates them to work harder in the classroom.

Concluding Remarks

School districts want teachers who think, take initiative, get along well with other people, solve problems, and are disciplined and responsible. However, when focused only on achievement and the cognitive growth of children, teachers are unable to effectively communicate behaviors that positively impact relationships between students and teachers. Academic learning is not a primary, natural, or a valued task (Comer, 2005). Rather, it is the positive relationships and sense of belonging that a good school culture provides that give children the comfort, confidence, competence, and motivation to learn. It is vital that the adults within the school setting interact with students in a way that creates a school climate where children feel comfortable, safe, protected, and where they can identify with and attach to adults. Educators can benefit by remembering that in years past there was a collective responsibility for children and that sense of community provided a social and emotional support system for children (Hajovsky, Mason, McCune, & Turek, 2017). With that knowledge in hand, teachers may be rewarded by building a sense of community in their classrooms. Curricular, instructional, and assessment activities are best facilitated by good relational and developmental conditions, and these conditions can be achieved by joining development principles and practices with teacher professional development in the area of student-teacher relationships.

Regardless of their age, children possess valuable perceptions of how their teacher behaves toward and interacts with them. These perceptions and information from students can serve as valuable tools in the school improvement process. Students who perceive low conflict and high closeness with their teacher are more likely to be engaged in the classroom. Moreover,

student-teacher relationship survey information can assist school officials in the formation of class rosters, student grouping, mentoring, and classroom instruction (Pianta & Hamre, 2001). This survey information can also be used as a guide for the development and implementation of programming that promotes positive school culture and serves as a guide to community building, recruiting, and staff retention.

The connection between teacher effectiveness and student outcomes plays an integral role throughout the educational life of a child (Hanushek & Rivkin, 1992). "The difference between being taught by an effective teacher and non-effective teacher can translate into the gain or loss of a full grade level of achievement in a single school year" (Borman & Kimball, 2005, p. 3). Raising student achievement should not rely only on the implementation of governmental law making, regulation, or policy such as NCLB and more recently ESSA or on state-level teacher evaluative and accountability measures. While important guardrails to ensure educator accountability in the implementation of state or national standards, accountability legislation should not be the central, singular, or only applied method for improving student achievement. Rather, there is the need to foster relationships between students and their teachers. Research has found that no significant learning can take place until there is a significant relationship in place first (Comer, 2005). Specifically, it is connecting students with teachers who support them not just as learners, but also as people, that leads to the highest levels of student achievement and success.

To promote achievement of high academic standards, teachers need to create supportive social contexts and develop positive relationships with students (Stipek, 2006). High-quality relationships are related to a number of important academic and social outcomes. Improving student-teacher relationship quality is a critical component of education as children do not enter

the academic arena with equal chances of developing high-quality relationships with teachers (Jerome, Hamre, & Pianta, 2008).

In contrast, teacher-child relationships characterized by conflict may lead to frequent attempts to control children's behavior and thus hinder efforts to promote a positive school or classroom environment for them. Therefore, children who form positive relationships with their teachers have an advantage when compared to those students who struggle to do so, and this may be the reason why negative student-teacher relationships are related to exclusion of children from the classroom (Hamre & Pianta, 2001). Ultimately, when teachers share a strong positive relationship with students, it can provide motivation for the teacher to spend extra time and energy promoting student success.

In future research, it would be worth identifying relationship-building characteristics that would assist teachers in building relationships with students and would be a strong companion to current content area knowledge and teaching pedagogy professional development.

Ultimately, accountability legislation such as NCLB and ESSA are likely to be a part of the educational landscape for the foreseeable future. However, given the findings of this study, implementing the requirements of accountability legislation should not be at the cost of other important educational goals such as social growth, long-term learning, development of socialization skills, and student-teacher relationships. When assessment becomes high-stakes and when teacher evaluation and compensation are in part determined by student achievement and growth data, it is understandable that teachers would focus their attention on the knowledge and skills the tests measure, leaving less time to engage their students in conversation about personal issues or make them feel valued and supported (Stipek, 2006). Further, the telescoping

effects of accountability legislation should not reduce the time teachers spend on key student-teacher relationship building activities.

In the final resolve, a key factor in student success in school is the relationship with the adults they encounter there. Not only are relationships with the adults who children interact with on a daily basis important, but they can have considerable impact on student motivation and student perceptions of themselves as learners (Pianta, 2000). Teachers are often considered experts in their fields and experts in terms of instructional pedagogy, but they can still fail students because they do not know how, or do not take the time necessary, to connect with them. Child competence is often embedded in and a property of relationships with adults, and these relationships can be critical regulators of child development by forming and shaping it. What children need as much as computers or books are caring relationships with an adult (O'Neil, 1997). Simply stated, educators need to put as much emphasis on the human interaction that builds student-teacher relationships in the classroom as they do on the development of standards, standardized achievement preparation, and testing.

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Appendix A

Reference Chart for Teacher Characteristics Build or Encumber Student-Teacher Relationships

Common Themes	Milanowski, 2004	Pianta	Stipek	Teven	Teven & Gorman
Empathy is the beginning point of learning and is dependent upon a clear acceptance of the learner's private world of awareness at the time.		•	•	•	
Positive views of others honor the internal dignity and integrity of each learner, holds positive expectations for behavior, and approaches others feelings that they can and will rather than they can't and won't.	•	•	•	•	
Positive view of self is believing in the worth, ability and potential of themselves.			•		
Authenticity is seeing the importance of openness, self-disclosure and being real as a person and teacher and melds personality uniqueness with curricular expectations.	•	•	•	•	
Meaningful purpose is seeing the importance of being visionary, reflective as a teacher, and commits to growth for all learners. and Vision			•		
Positivity is believing in the worth, ability and potential of yourself and others.		•	•	•	
Assertiveness and Verbal Aggressiveness are perceived by students as less competent, less immediate, and less appropriate				•	•

Appendix B

STUDENT-TEACHER RELATIONSHIP SCALE - Teacher Survey

STUDENT-TEACHER RELATIONSHIP SCALE Teacher Survey

Child: _____ Teacher:_____ Grade:_____

Please reflect on the degree to which each of the following statements currently applies to your relationship with this child.

Using the scale below, circle the appropriate number for each item.

		Definitely does not apply	Not Really	Neutral Not Sure	Applies Sometimes	Definitely Applies
1	I share an affectionate, warm relationship with this child.	1	2	3	4	5
2	This child and I always seem to be struggling with each other.	1	2	3	4	5
3	If upset, this child will seek comfort from me.	1	2	3	4	5
4	This child is uncomfortable with physical affection or touch from me.	1	2	3	4	5
5	This child values his/her relationship with me.	1	2	3	4	5
6	This child appears hurt or embarrassed when I correct him/her.	1	2	3	4	5
7	When I praise this child, he/she beams with pride.	1	2	3	4	5
8	This child reacts strongly to separation from me.	1	2	3	4	5
9	This child spontaneously shares information about himself/herself.	1	2	3	4	5
10	This child is overly dependent on me.	1	2	3	4	5
11	This child easily becomes angry with me.	1	2	3	4	5
12	This child tries to please me.	1	2	3	4	5
13	This child feels that I treat him/her unfairly.	1	2	3	4	5
14	This child asks for my help when he/she really does not need help.	1	2	3	4	5
15	It is easy to be in tune with what this child is feeling.	1	2	3	4	5

16	This child sees me as a source of punishment and criticism.	1	2	3	4	5
17	This child expresses hurt or jealousy when I spend time with other children	1	2	3	4	5
18	This child remains angry or is resistant after being disciplined.	1	2	3	4	5
19	When this child is misbehaving, he/she responds well to my look or tone of voice.	1	2	3	4	5
20	Dealing with this child drains my energy.	1	2	3	4	5
21	I've noticed this child copying my behavior or ways of doing things.	1	2	3	4	5
22	When this child is in a bad mood, I know we're in for a long and difficult day.	1	2	3	4	5
23	This child's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
24	Despite my best efforts, I'm uncomfortable with how this child and I get along.	1	2	3	4	5
25	This child whines or cries when he/she wants something from me.	1	2	3	4	5
26	This child is sneaky or manipulative with me.	1	2	3	4	5
27	This child openly shares his/her feelings and experiences with me.	1	2	3	4	5
28	My interactions with this child make me feel effective and confident.	1	2	3	4	5

Appendix C

Typical Lexile Reader Measures by Grade

Grade	Reader Measures, Mid-Year 25th percentile to 75th percentile (IQR)*
1	BR120L to 295L**
2	170L to 545L
3	415L to 760L
4	635L to 950L
5	770L to 1080L
6	855L to 1165L
7	925L to 1235L
8	985L to 1295L
9	1040L to 1350L
10	1085L to 1400L
11 and 12	1130L to 1440L

* The Lexile range shown is the middle 50 percent of reader measures for each grade. This means that 25 percent of students had Lexile measures below the lower number and 25 percent had Lexile measures above the higher number.

** Beginning Reader (BR) is a code given to readers and texts that are below 0L on the Lexile scale. The lower the number following the BR code, the more advanced the reader or text is. The higher the number, the less complex the text is or less skilled the reader is.

Appendix D

STUDENT-TEACHER RELATIONSHIP SCALE - Student Survey

	Name: _____ Teacher Name: _____ Directions: Read each question carefully. Then circle the answer that best describes how you feel about the question.	 Not True	Sometimes Not True	 Not Sure	Sometimes True	 Always True
1	My teacher cares about me.	1	2	3	4	5
2	My teacher and I struggle to get along.	1	2	3	4	5
3	If upset, I will seek comfort from my teacher.	1	2	3	4	5
4	I am uncomfortable with a hug or a touch from my teacher.	1	2	3	4	5
5	My teacher values his/her relationships	1	2	3	4	5
6	I get hurt or embarrassed when my teacher corrects me.	1	2	3	4	5
7	When I say nice things to my teacher he/she beams with pride.	1	2	3	4	5
8	I do not like to be separated from my teacher.	1	2	3	4	5
9	My teacher freely shares information about himself/herself with me.	1	2	3	4	5
10	My teacher is too dependent on me.	1	2	3	4	5
11	My teacher easily becomes angry with me.	1	2	3	4	5
12	I like to please my teacher.	1	2	3	4	5
13	I feel my teacher treats me unfairly.	1	2	3	4	5
14	I ask my teacher for help even when I don't need it.	1	2	3	4	5
15	It is easy to know what my teacher is feeling.	1	2	3	4	5
16	I see my teacher as only someone who punishes or criticizes me.	1	2	3	4	5
17	I feel hurt or jealous when my teacher spends time with other children.	1	2	3	4	5
18	My teacher stays angry at me even after he/she disciplines me.	1	2	3	4	5
19	When I am misbehaving my teacher only has to look at me or say to get back on task and I do.	1	2	3	4	5
20	Dealing with my teacher drains my energy.	1	2	3	4	5

21	I like to copy my teacher or the way he/she does things.	1	2	3	4	5
22	When my teacher is in a bad mood I know I am in for a long and difficult day.	1	2	3	4	5
23	My teacher's feelings toward me can be unpredictable or can change suddenly.	1	2	3	4	5
24	No matter how hard I try I'm uncomfortable with how my teacher and I get along.	1	2	3	4	5
25	My teacher complains a lot when he/she wants me to do something for them.	1	2	3	4	5
26	My teacher is mean and tries to control me.	1	2	3	4	5
27	My teacher is sneaky or controlling of me.	1	2	3	4	5
28	My interactions with my teacher make me feel effective and confident.	1	2	3	4	5

Appendix E

Internal Consistency and retest Reliability of STAR Reading Enterprise

	Internal Consistency		Retest Reliability	
Grade	Students	Reliability Coefficient	Students	Reliability Coefficient
All	1,227,915	.97	60,000	.90
1	100,000	.95	5,000	.54
2	100,000	.94	5,000	.66
3	.95	5,000	5,000	.75
4	.95	5,000	5,000	.77
5	.95	5,000	5,000	.78
6	100,000	.93	5,000	.83
7	100,000	.94	5,000	.82
8	100,000	.94	5,000	.83
9	95,171	.94	5,000	.85

10	94,624	.85
11	93,118	.85
12	89,031	.85

Appendix F

Summary of STAR Reading Validity Studies

	Predictive Validity			Concurrent and Other External Validity		
Grade	Studies	Students	Average Correlation	Studies	Students	Average Correlation
1	6	7,477	.68	15	1,135	.77
2	10	184,434	.78	32	3,142	.72
3	30	200,929	.80	44	4,051	.75
4	25	185,528	.82	41	5,409	.75
5	29	126,029	.82	40	3,588	.75
6	23	82,189	.82	37	2,728	.71
7	23	64,978	.81	33	3,294	.70
8	25	34,764	.81	29	2,148	.72
9	8	9,567	.83	15	949	.72
10	9	7,021	.85	11	566	.61
11	6	6,653	.86	6	324	.70
12	2	3,107	.86	4	165	.74